


VM 700

VIDEO MEASUREMENT SET

VOLUME II

*Please Check for
CHANGE INFORMATION
at the Rear of this Manual*

Copyright © 1990 Tektronix, Inc. All rights reserved. Printed in U.S.A. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved.

TEKTRONIX, TEK, PLOT 10, TEKTEST, SCOPE-MOBILE, and  are registered trademarks.

For further information, contact: Tektronix, Inc., Corporate Offices, P.O. Box 500, Beaverton, OR 97077. Phone: (503) 627-7111; TLX: 192825; TWX: (910) 467-8708; Cable: TEKWSGT.

Subsidiaries and distributors worldwide.

DIAGRAMS/CIRCUIT BOARD ILLUSTRATIONS

Symbols

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI Y32.14-1973 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

Both overline and parenthesis indicate a low asserting state.

Example: $\overline{\text{ID,CONTROL}}$ or (ID CONTROL)

Abbreviations are based on ANSI Y1.1-1972.

Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

Y14.15, 1966 — Drafting Practices.

Y14.2, 1973 — Line Conventions and Lettering.

Y10.5, 1968 — Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

American National Standard Institute
1430 Broadway, New York, New York 10018

Component Values

Electrical components shown on the diagrams are in the following units unless noted otherwise:

Capacitors:

Values one or greater are in picofarads (pF).

Values less than one are in microfarads (μF).

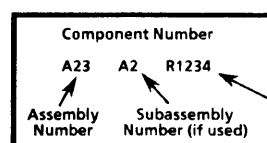
Resistors = Ohms (Ω).

The following information and special symbols may appear in this manual.

Assembly Numbers

Each assembly in the instrument is assigned an assembly number (e.g., A20). The assembly number appears on the diagram (in circuit board outline), circuit board illustration title, and lookup table for the schematic diagram.

The Replaceable Electrical Parts List is arranged by assembly number in numerical sequence; the components are listed by component number. Example:

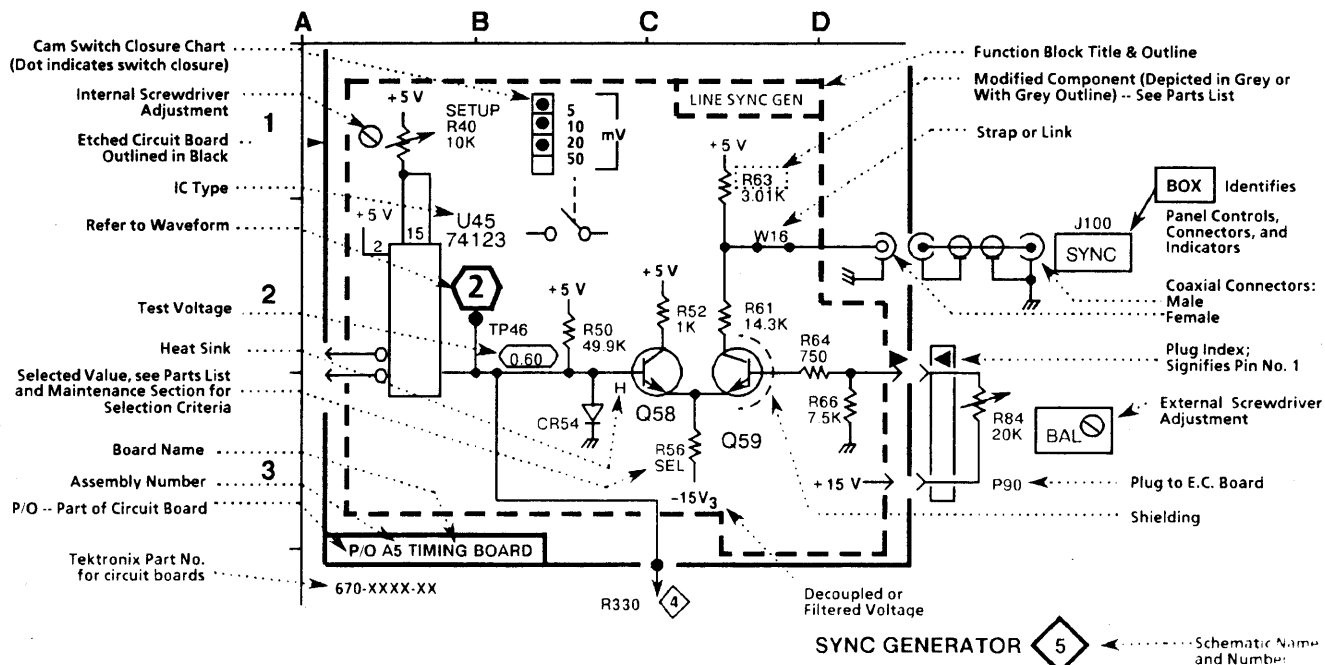


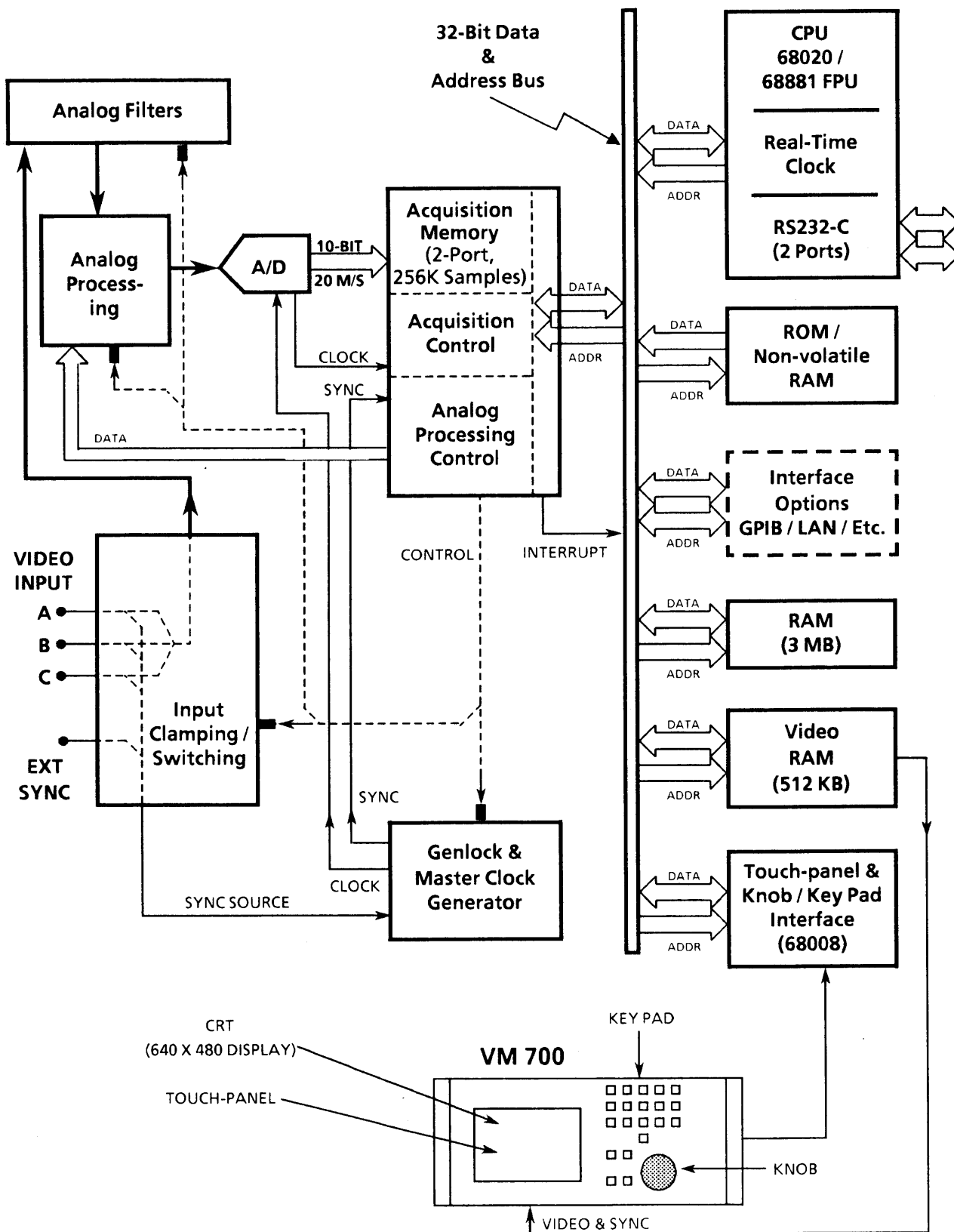
Chassis-mounted components have no Assembly No. prefix. See end of Replaceable Electrical Parts List

Grid Coordinates

The schematic diagram and circuit board component location illustration have grids. A lookup table with the grid coordinates is provided for ease of locating the component. Only the components illustrated on the facing diagram are listed in the lookup table.

When more than one schematic diagram is used to illustrate the circuitry on a circuit board, the circuit board illustration may only appear opposite the first diagram; the lookup table will list the diagram number of other diagrams that the other circuitry appears on.





The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C159	C4	R616	G4
C542	F4	R617	G4
C625	G4	R618	C2
C637	H4	R628	G4
C640	E4	R635	G4
C710	A1	R636	G4
C711	B2	R637	H3
C713	B2	R640	E4
C714	C2	R643	G4
C724	E3	R644	E4
C727	E3	R645	E4
C730	G4	R711	B2
C743	E4	R712	C2
C821	E2	R718	D3
C822	D2	R722	C2
C841	E4	R723	C2
		R724	D2
CR260	C4	R725	D2
CR261	D4	R726	E2
CR714	C1	R727	D3
CR720	C2	R734	E2
CR721	C2	R735	E2
		R738	F3
J619	A1	R743	E4
J718	A2	R744	C5
		R748	E4
K718A	B1	R811	C1
K718B	B2	R812	B1
K718C	B1	R813	B2
		R820	D2
L737	E4	R821	D3
L834	E4	R822	D3
		R823	E2
Q239	G5	R830	E3
Q260	C4	R831	E4
Q261	C4	R832	D2
Q262	C3	R833	E3
Q813	C1	R834	E4
R141	G5	T715	A1
R143	G5		
R144	F5	TP735	E2
R160	B5		
R161	C4	U154B	C4
R162	C4	U542A	F4
R163	D4	U618B	G3
R164	C4	U628	G4
R242	G4	U638A	H4
R243	G5	U638B	G4
R244	G5	U724	D2
R253	C3	U728	D2
R254	C4	U742	F4
R255	C4		
R256	C4	VR621	C2
R257	C4	VR722	C2
R366	E4		
R615	G3		

A1 Analog Input Board

ANALOG BOARD
Schematic <2> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A1 Partial A1 also shown on Schematics 1, 3, 4, 5, 6, and 7.

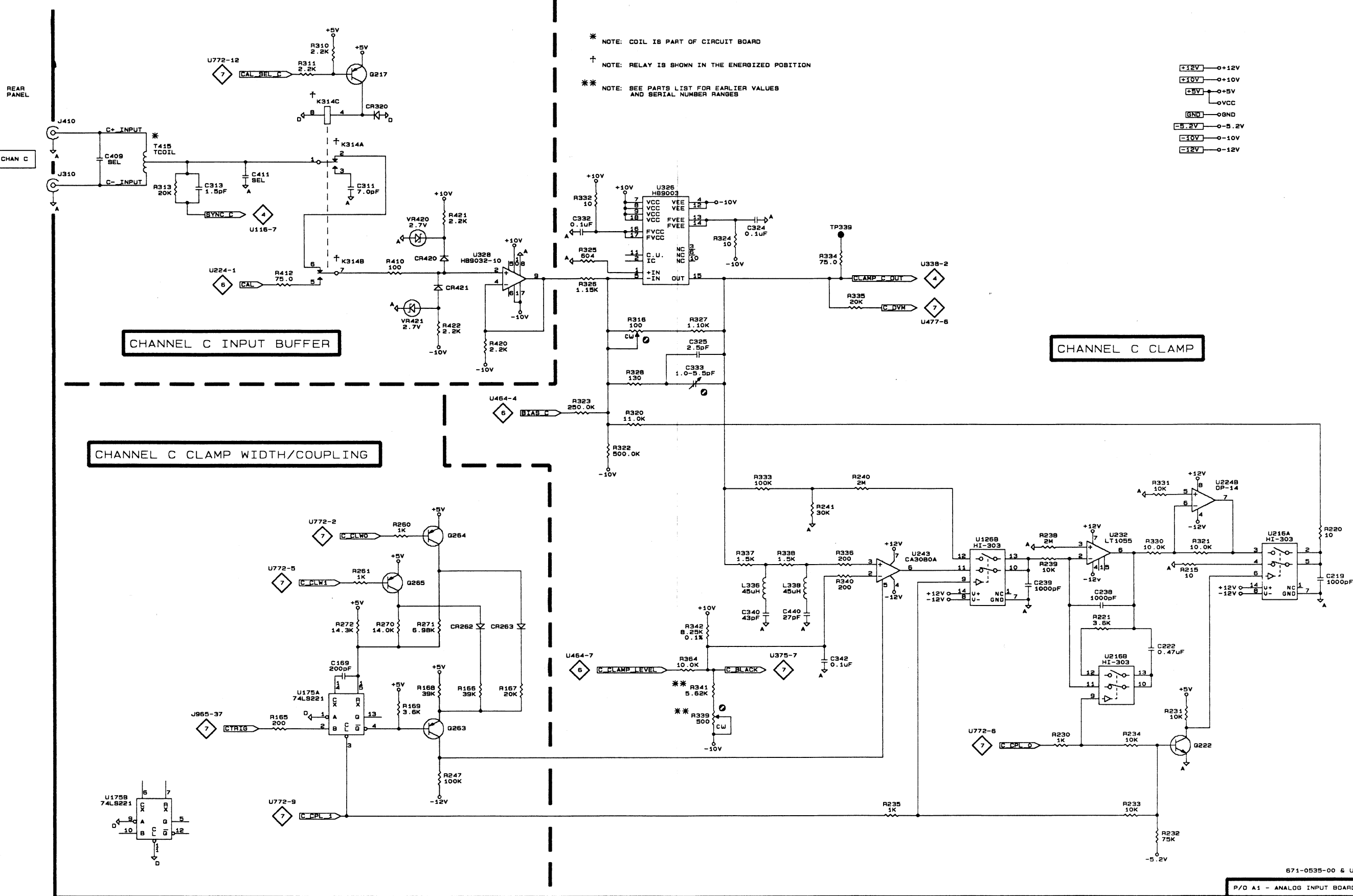
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C149	C4	R436	G4
C416	B2	R440	E4
C417	B2	R441	E4
C424	G4	R442	C5
C434	G4	R443	E4
C443	E4	R444	E4
C510	A1	R514	C2
C514	C2	R515	B2
C522	E3	R516	D2
C526	E3	R520	C2
C535	H4	R521	C2
C536	F4	R522	D2
C540	E4	R523	E2
C544	E4	R524	D3
		R531	E2
C620	E2	R532	E2
C621	D2	R533	H3
CR246	C4	R534	F3
CR247	D4	R610	D2
CR417	C1	R611	G4
CR520	C2	R612	G4
CR521	C2	R614	G3
		R620	D3
J510	A2	R621	D3
J610	A1	R622	D3
		R623	E2
K512A	B1	R630	E3
K512B	B2	R631	E4
K512C	B1	R632	D2
		R633	E3
L539	E4	R634	E4
L635	E4		
		TS15	A1
Q238	G5		
Q246	C4	TP534	E2
Q247	C3		
Q248	C4	U154A	C4
Q416	C1	U425	G4
		U436A	G4
R132	G5	U436B	H4
R133	G4	U442	F4
R140	G5	U523	D2
R142	F5	U528	D2
R145	B5	U542B	F4
R146	C4	U618A	G3
R147	D4		
R148	C4	VR422	C2
R149	C4	VR520	C2
R236	G5		
R237	G5		
R245	C4		
R246	C3		
R250	C4		
R251	C4		
R252	C4		
R365	E4		
R415	C1		
R416	B1		
R418	B2		
R423	C2		
R424	G4		
R431	G4		
R432	G4		

ANALOG BOARD
Schematic <3> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A1 Partial A1 also shown on Schematics 1, 2, 4, 5, 6, and 7.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C169	C4	R272	C4
C219	H4	R310	C1
C222	G4	R311	B1
C238	G4	R313	B2
C239	F4	R316	D2
C311	C2	R320	D3
C313	B2	R321	G4
C324	E2	R322	D3
C325	E3	R323	D3
C332	D2	R324	E2
C333	E3	R325	D2
C340	E4	R326	D2
C342	E4	R327	E2
C409	A1	R328	D3
C411	B2	R330	G4
C440	E4	R331	G3
		R332	D2
CR262	C4	R333	E3
CR263	D4	R334	E2
CR320	C1	R335	E2
CR420	C2	R336	E4
CR421	C2	R337	E4
		R338	E4
J310	A2	R340	E4
J410	A1	R341	E4
		R342	E4
K314A	B1	R364	E4
K314B	B2	R410	C2
K314C	B1	R412	B2
		R420	C2
L336	E4	R421	C2
L338	E4	R422	C2
Q217	C1	T415	A1
Q222	G5	TP339	E2
Q263	C4	U126B	F4
Q264	C3	U175A	C4
Q265	C4	U175B	A5
		U216A	H4
R165	B5	U216B	G4
R166	C4	U224B	G3
R167	D4	U232	G4
R168	C4	U243	F4
R169	C4	U326	D2
R215	G4	U328	D2
R220	H3		
R221	G4	VR420	C2
R230	G5	VR421	C2
R231	G4		
R232	G5		
R233	G5		
R234	G5		
R235	F5		
R238	G4		
R239	G4		
R240	F3		
R241	E3		
R247	C5		
R260	C3		
R261	C4		
R270	C4		
R271	C4		



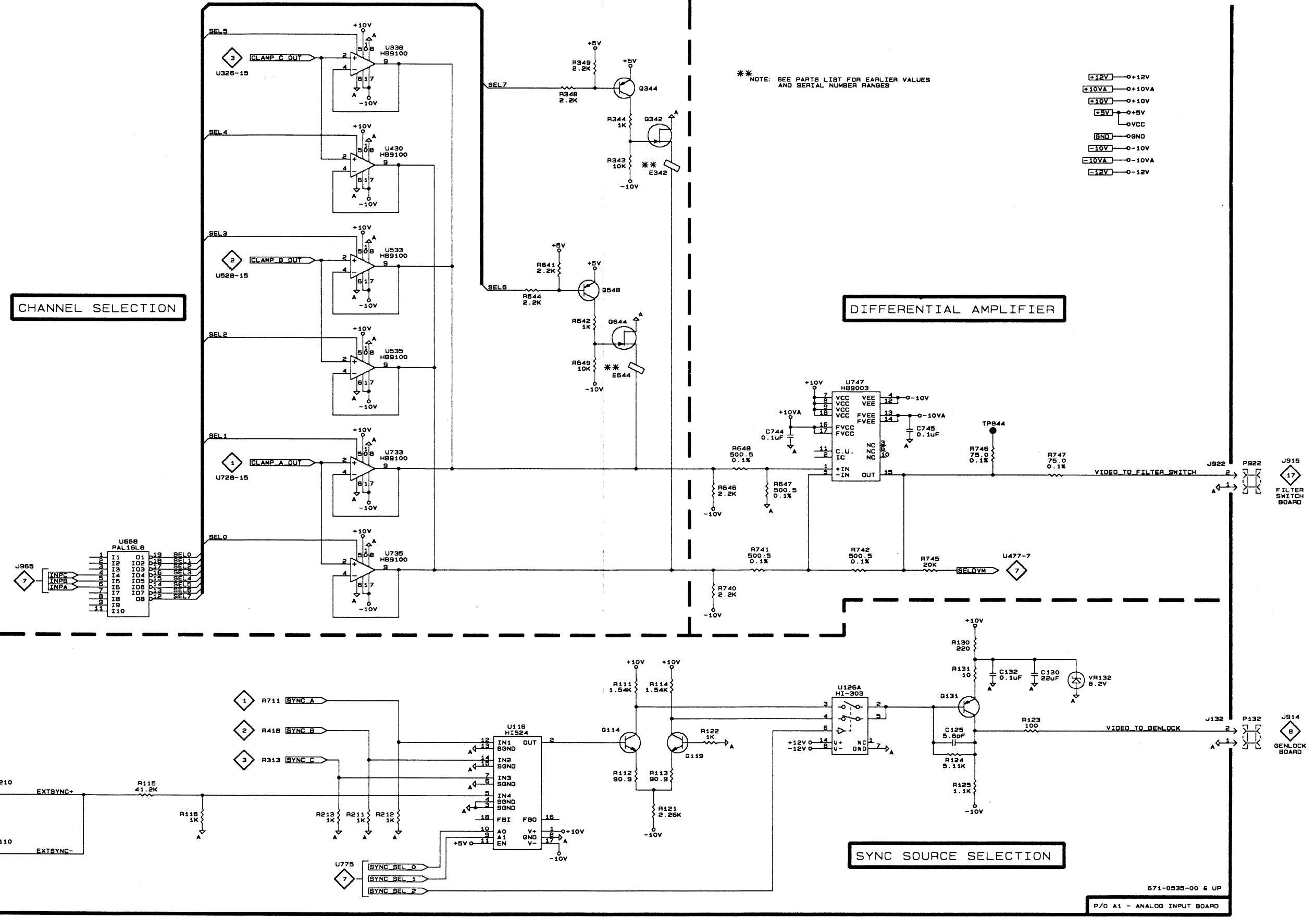
ANALOG BOARD
 Schematic <4> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A1 Partial A1 also shown on Schematics 1, 2, 3, 5, 6, and 7.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C125	F5	TP844	G3
C130	G4		
C132	G4	U116	D5
C744	F3	U126A	F4
C745	F3	U338	C1
		U430	C1
J110	A5	U533	C2
J132	H4	U535	C3
J210	A5	U668	B4
J922	H3	U733	C3
		U735	C4
Q114	E4	U747	F3
Q119	E4		
Q131	G4	VR132	G4
Q342	E1		
Q344	E1		
Q548	D2		
Q644	E2		
R111	E4		
R112	E5		
R113	E5		
R114	E4		
R115	B5		
R116	B5		
R121	E5		
R122	E5		
R123	G4		
R124	F5		
R125	G5		
R130	G4		
R131	G4		
R211	C5		
R212	C5		
R213	C5		
R343	E1		
R344	E1		
R348	D1		
R349	D1		
R544	D2		
R641	D2		
R642	D2		
R646	E3		
R647	E3		
R648	E3		
R649	D3		
R740	E4		
R741	E4		
R742	F4		
R745	F4		
R746	G3		
R747	G3		

A B C D E F G H



REAR PANEL
EXT SYNC

VM700

CHANNEL & SYNC SOURCE SELECTION

671-0535-00 & UP
P/O A1 - ANALOG INPUT BOARD

ANALOG BOARD
Schematic <5> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A1 Partial A1 also shown on Schematics 1, 2, 3, 4, 6, and 7.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C263	B1	R264	B1	R854	D4
C451	G4	R265	B1	R855	B3
C452	G4	R266	B1	R856	D5
C453	H4	R449	H5	R858	D1
C455	G4	R450	G4	R862	G5
C556	G4	R451	H4	R924	E3
C660	B2	R452	H4	R925	F2
C666	B1	R453	H4	R930	A4
C763	B2	R454	H4	R931	A4
C843	C4	R455	G4	R932	F2
C846	E1	R456	G4	R933	F2
C862	F5	R555	G4	R934	E3
C922	A4	R556	E4	R935	F2
C933	F2	R557	G4	R936	F2
C940	F2	R650	F3	R937	G2
C943	F1	R651	F3	R938	E2
C944	F1	R652	E3	R939	E2
C945	D2	R653	E3	R941	F2
C946	D2	R654	E3	R943	E2
C956	C2	R655	E3	R944	F1
C957	C1	R656	E5	R946	E2
		R657	E4	R955	D2
CR653	E3	R658	F4		
CR654	E3	R666	C1	TP450	H4
CR655	E5	R667	C1	TP453	H4
CR656	E4	R750	B3	TP932	G1
CR657	E4	R751	C3		
CR753	E4	R752	B3	U278B	B1
CR826	A3	R753	C3	U373D	B2
CR831	A4	R754	E4	U458	G3
CR832	A4	R755	E4	U664	C1
CR835	B4	R756	E4	U767	B5
CR837	B4	R757	E4	U848	C4
		R758	F4	U856	C4
J550	H4	R759	E4	U864	F4
J555	F4	R760	B1	U868	B4
J923	A2	R761	B1	U935	F1
J924	E2	R762	B1	U946	E2
J955	C1	R763	A1		
		R764	F5		
L947	D2	R765	F5		
L955	C2	R766	F5		
		R767	F5		
Q654A	F3	R827	A3		
Q654B	E3	R835	A3		
Q656	E4	R836	A4		
Q658	F4	R837	B4		
Q753	E4	R842	B4		
Q754	E4	R843	B4		
Q755	E4	R844	C4		
Q835A	A4	R846	E1		
Q835B	B4	R850	D4		
Q850A	B3	R851	D4		
Q850B	C3	R852	D4		
Q928	A3	R853	D4		

ANALOG BOARD
Schematic <6> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

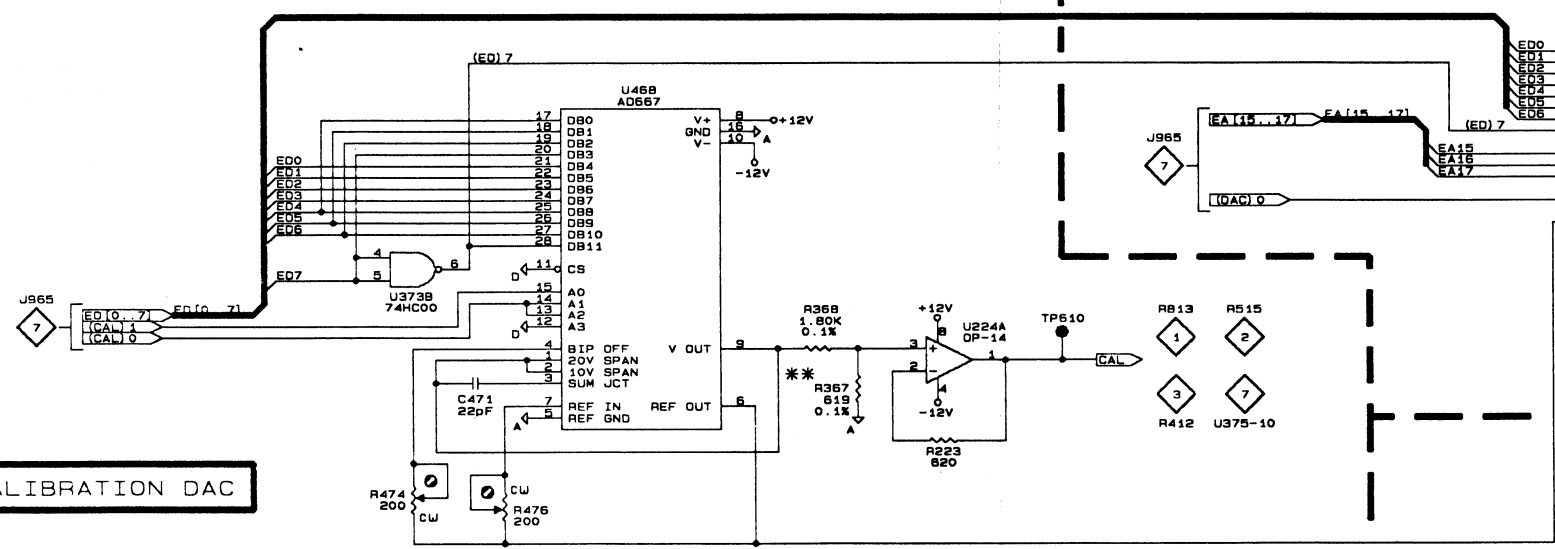
ASSEMBLY A1 Partial A1 also shown on Schematics 1, 2, 3, 4, 5, and 7.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C121	C5	C735	C5	R367	D2
C122	D5	C740	H5	R368	D2
C126	B5	C747	C5	R474	C2
C170	B5	C748	E5	R476	C2
C212	D5	C769	B2	R554	D4
C215	G5	C782	B2	R697	C4
C220	F5	C784	B2	R698	C3
C221	G5	C792	D4	R794	F3
C223	F5	C793	G4	R796	G3
C236	H5	C797	D4	R876	H4
C243	F5	C798	G4	R877	H3
C250	B5	C832	G5	R880	F3
C264	F5	C842	C5	R884	G4
C310	G5	C845	H5	R890	F4
C350	F5	C861	B5	R891	F4
C355	B4	C864	B5	R892	F4
C371	B5	C885	E5	R976	H4
C372	H5	C893	E5	R977	H3
C410	D5	C942	G5		
C420	C5	C977	H4	TP220	A5
C422	F5	C978	H3	TP250	A5
C423	H5			TP252	D3
C430	E5	CR551	E4	TP254	D3
C431	C5	CR688	D3	TP256	B3
C432	D5	CR689	D4	TP360	C4
C433	C5	CR694	D3	TP362	C4
C435	F5	CR787	G3	TP519	A5
C444	F5	CR794	D3	TP610	E2
C456	G5	CR881	G3	TP780	G4
C457	G5	CR882	G4	TP782	G3
C460	F5	CR883	G4	TP783	A5
C471	C2			TP819	A5
C476	F5	F588	B3	TP825	A5
C520	D5				
C521	C5	J690	A2	U224A	D2
C530	D5			U266	E3
C531	C5	L683	B3	U352A	B3
C532	E5	L782	B3	U352B	B4
C533	C5			U373B	C1
C545	G5	Q352	B3	U464	F1
C552	D4	Q788	G4	U468	C1
C555	D4	Q796	G3	U553	D4
C560	F5	Q877	H4	U688	D3
C578	B5	Q878	H3	U784	D4
C580	B3			U890A	F3
C596	E5	R223	D2	U890B	F4
C597	E5	R259	B3		
C622	F5	R345	B4		
C624	H5	R346	B4		
C668	B5	R347	B4		
C678	B5	R350	B4		
C681	B5	R351	B4		
C692	D3	R352	B4		
C694	D3	R353	B3		
C721	D5	R354	A3		
C722	C5	R355	A4		
C731	G5	R356	C4		
C732	D5	R357	B4		
C733	C5	R360	F3		
C734	D5	R362	F3		

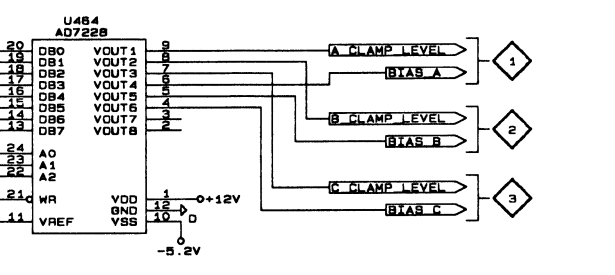
A B C D E F G H

- +15VA - 0+15VA
- +12V - 0+12V
- +10VA - 0+10VA
- +5V - 0+5V
- +5VA - 0+5VA
- +1.5V - 0+1.5V
- GND - 0GND
- 1.5V - 0-1.5V
- 10VA - 0-10VA
- 12V - 0-12V
- 15V - 0-15V

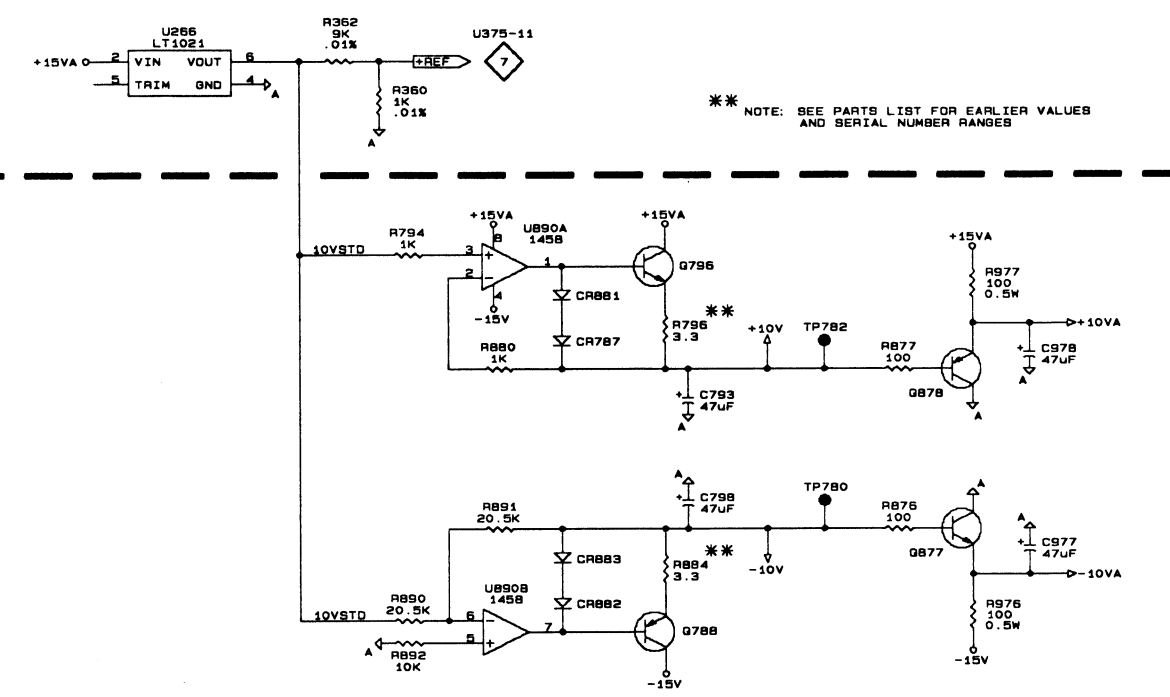
CALIBRATION DAC



CLAMP & BIAS GENERATORS

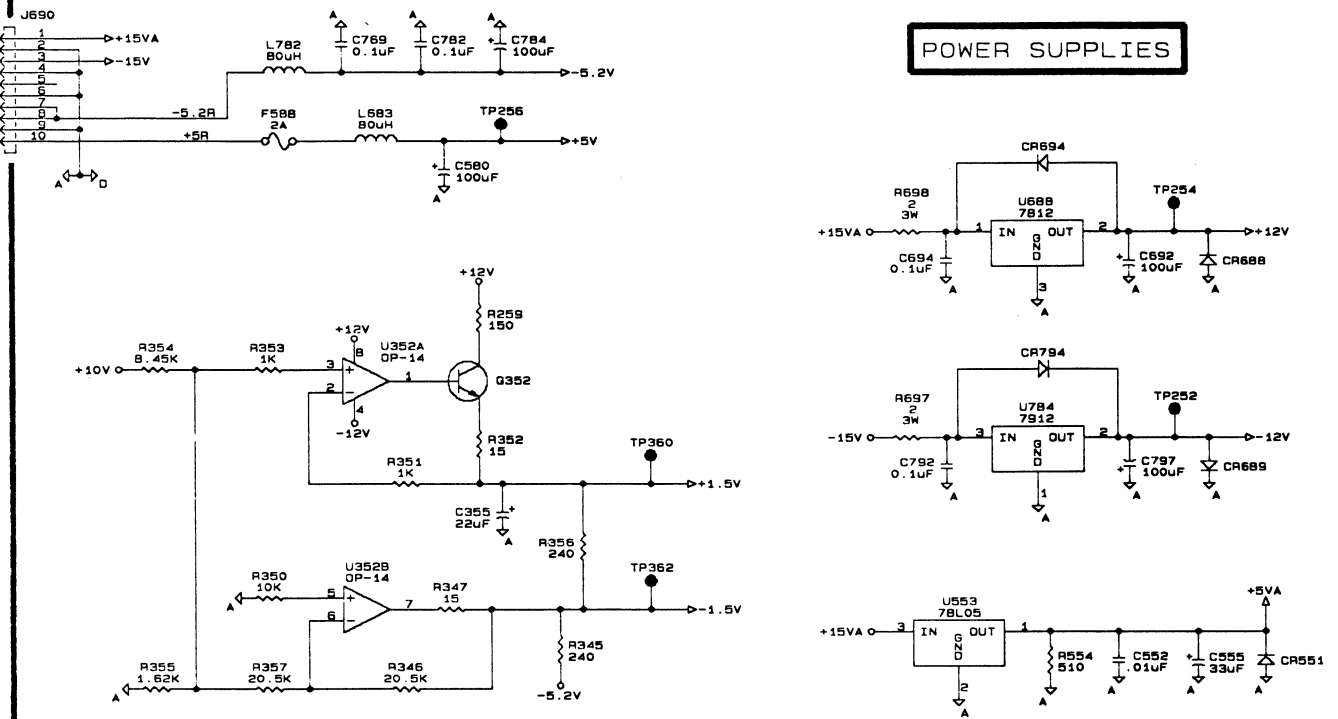


PRECISION VOLTAGE REFERENCE

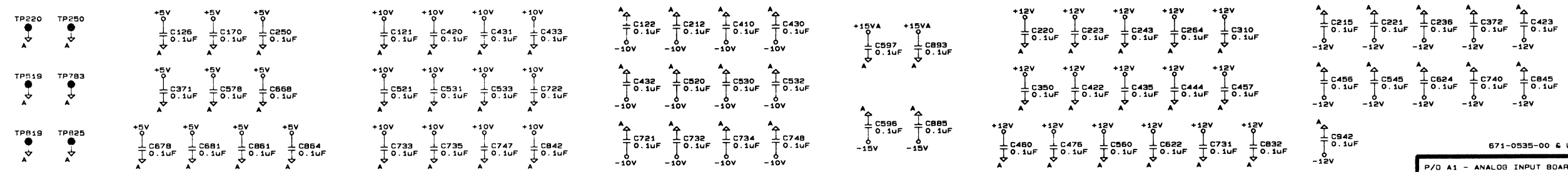


NOTE: SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES

POWER SUPPLIES



DECOUPLING CAPS



ANALOG BOARD
Schematic <7> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A1 *Partial A1 also shown on Schematics 1, 2, 3, 4, 5, and 6.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
C178	G2
C179	G1
C262	G2
C271	H2
C272	G2
C373	E4
C374	E4
C375	E3
C472	F3
C473	E3
C474	E3
C475	E3
C570	E1
C571	E1
C572	E2
C573	F2
C574	E2
C575	E1
C576	E2
C577	E2
J965A	A2
J965B	A4
R178	G1
R262	G2
R263	G2
R268	D3
R269	D4
R274	G2
R275	H1
R276	G1
R277	E3
R278	H2
R472	F3
U264	D3
U270	H1
U278A	G1
U373C	E2
U375	F3
U477	F1
U676A	D1
U676B	D1
U676C	D2
U676D	D2
U772	C4
U775	C1
U873	C4
U875	C3

A B C D E F G H

DVM SELECTION

MODE CONTROL
REGISTERS

DVM SELECTION

DVM

J325
CONTROLLER
BOARD

J325
CONTROLLER
BOARD

+15VA 0-15VA
+12V 0-12V
+5V 0-5V
0VCC 0VCC
0GND 0GND
-1.5V 0-1.5V
-5.2V 0-5.2V
-12V 0-12V
-15V 0-15V

671-0535-00 & UP

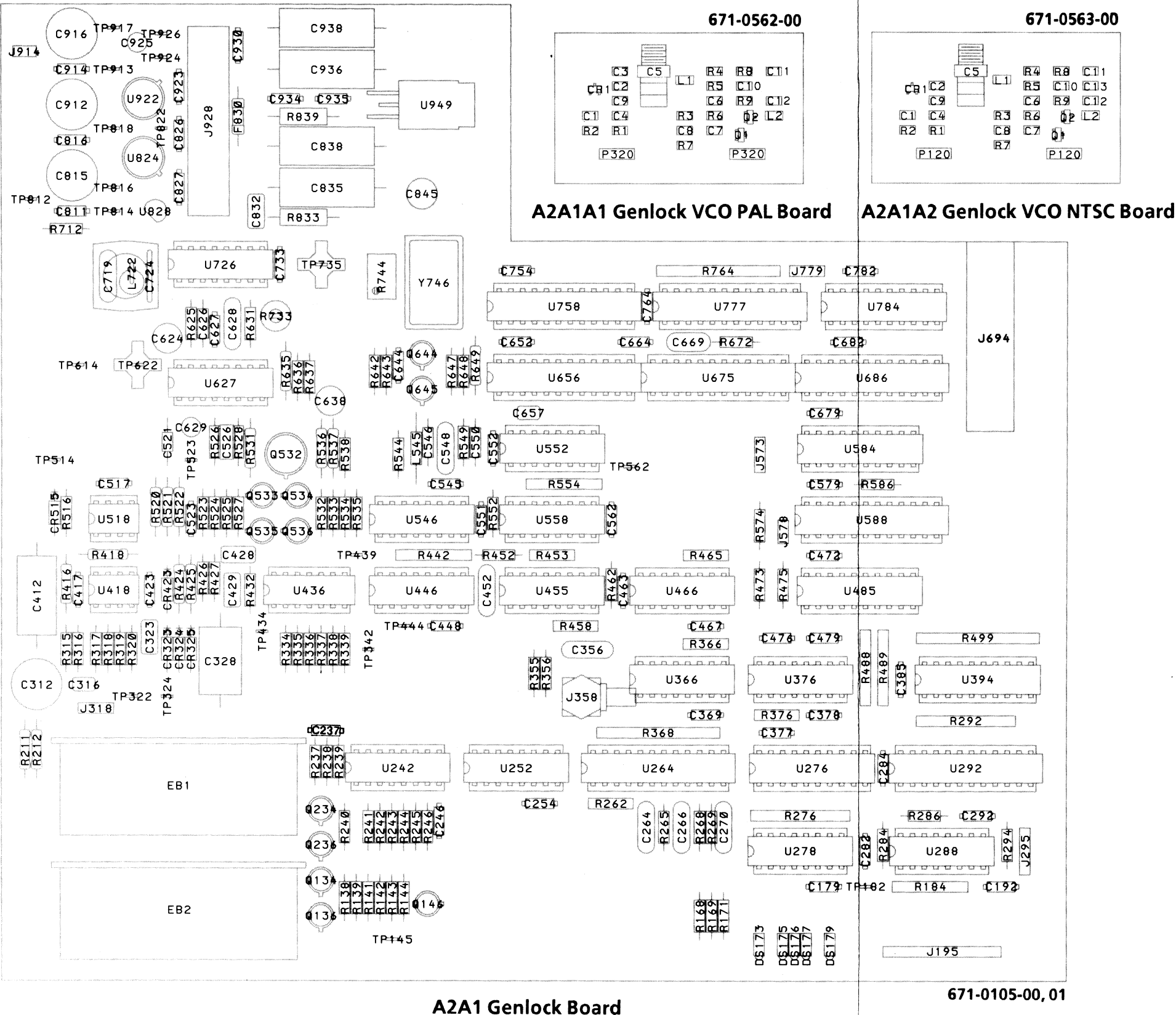
P/O-A1 - ANALOG INPUT BOARD

VM700

CONTROLLER INTERFACE

7

VM 700 SERVICE



A2A1 Genlock Board

671-0105-00, 01

GENLOCK BOARD
Schematic <8> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

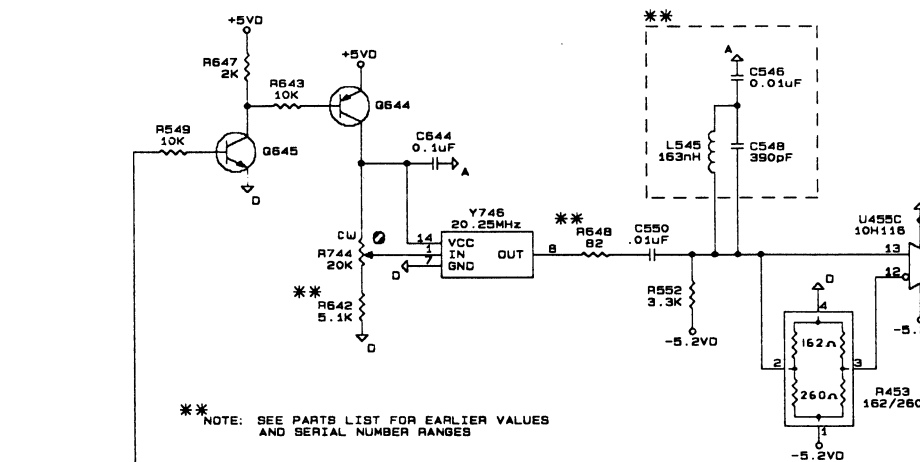
ASSEMBLY A2 Partial A2 also shown on Schematics 9, 10, 11, and 12.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C476	F3	TP622	B4
C521	D4	TP735	D4
C526	D5	TP812	A4
C546 *	C1		
C548 *	C1	U376B	F1
C550	C2	U376D	G3
C624	C4	U455C	D2
C626	C4	U466	E1
C628	C5	U546A	E3
C629	D4	U546C	E4
C644	B1	U546D	E4
C657	E4	U552A	E4
C719	A4	U552B	F5
C724	B4	U558A	E1
		U558C	F4
J914	A4	U558D	F3
		U627	C4
L545 *	C1	U686	H1
L722	B4	U726A	D5
		U726B	A4
Q644	B1	U726C	B4
Q645	B1		
		Y746	B2
R262A	D2		
R376	F2		
R453	C2		
R465B	F2		
R526	D4		
R528	D5		
R544	E3		
R549	A1		
R552	C2		
R554A	F4		
R554B	F3		
R554C	F4		
R554D	F4		
R554E	F5		
R625	B4		
R631	C5		
R635	C5		
R636	D4		
R637	D5		
R642	B2		
R643	B1		
R647	B1		
R648	C2		
R649	E4		
R712	A4		
R733	B5		
R744	B2		
TP523	D4		

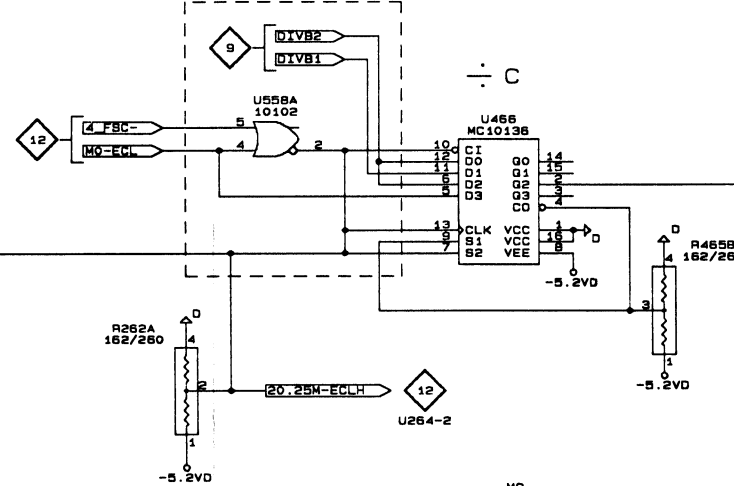
* See Parts List for Serial Ranges.

A B C D E F G H

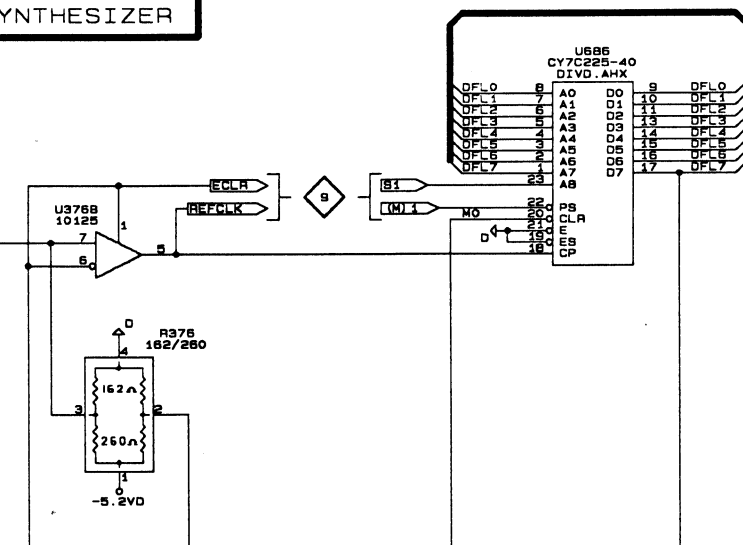
TCXO REF



ECL Wire-Or Mux

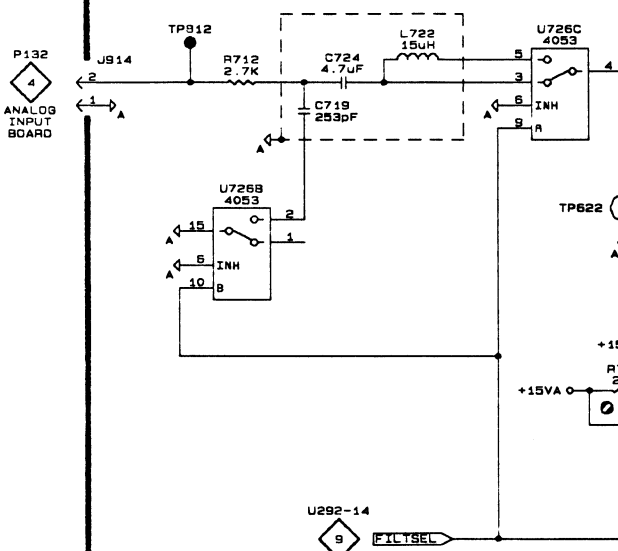


FH SYNTHESIZER

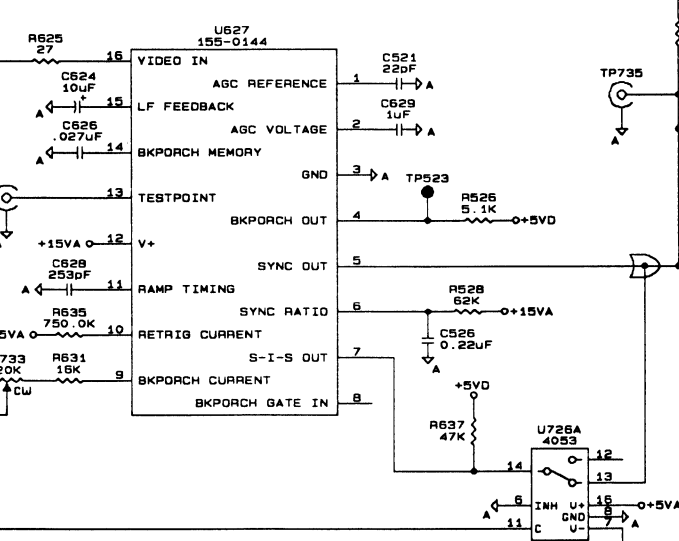


INPUT VIDEO INTERFACE

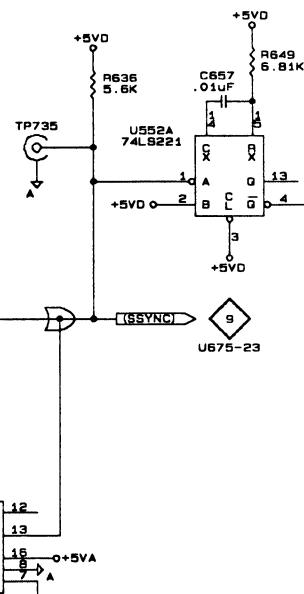
Sound-in-Sync Filter



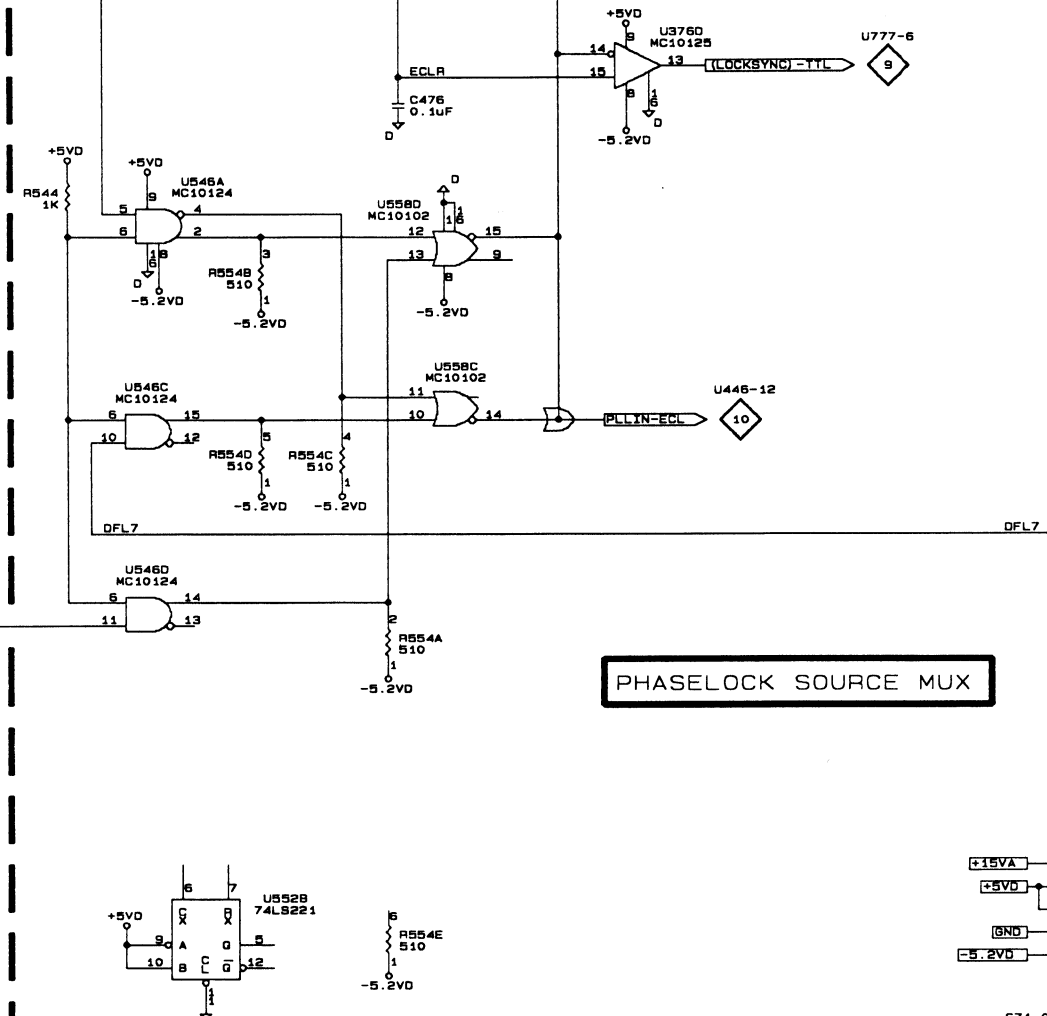
Sync Stripper



One-Shot



PHASELOCK SOURCE MUX



GENLOCK BOARD
Schematic <9> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A2 Partial A2 also shown on Schematics 8, 10, 11, and 12.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C669	C5
J195	H4
J295	F4
J573	E5
J694	A1
J779	G3
R184	G5
R286	A1
R292	C1
R294	F5
R366	D1
R488	D2
R489	D2
R499	C2
R574	F5
R586	C4
R672	C5
R764	H1
U288A	G5
U288B	G4
U288D	G5
U292	B1
U366	D2
U376A	E2
U394	C2
U584	F4
U588	C3
U656	F1
U675	D5
U758	F2
U777	G2
U784	C4

GENLOCK BOARD
Schematic <10> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A2 Partial A2 also shown on Schematics 8, 9, 11, and 12.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C316	H3	R536	C1
C323	G3	R537	C1
C328	E3	R538	C1
C412	G3		
C428	E3	TP322	G3
C429	E3	TP342	B3
C452	C5	TP434	C2
C638	C1	TP439	C1
		TP444	C5
CR323	G3		
CR324	F4	U288C	A5
CR325	F3	U418A	G2
CR423	G4	U418B	E2
		U436A	C3
J318	H3	U436B	C3
		U436C	C4
Q532A	C2	U436D	H5
Q532B	C1	U436E	G5
Q533	D2	U446A	B4
Q534	C2	U446B	B3
Q535	D2	U558B	C5
Q536	B2		
R315	G3		
R316	G3		
R317	G3		
R318	F2		
R319	G3		
R320	F3		
R334	C3		
R335	C3		
R336	C3		
R337	C3		
R338	C4		
R339	B4		
R424	F2		
R425	F3		
R426	E3		
R427	E2		
R432	C4		
R442C	C5		
R442D	B5		
R442E	B5		
R452	C5		
R523	D1		
R524	D1		
R525	D2		
R527	D2		
R531	D1		
R532	B2		
R533	C2		
R534	B1		
R535	B1		

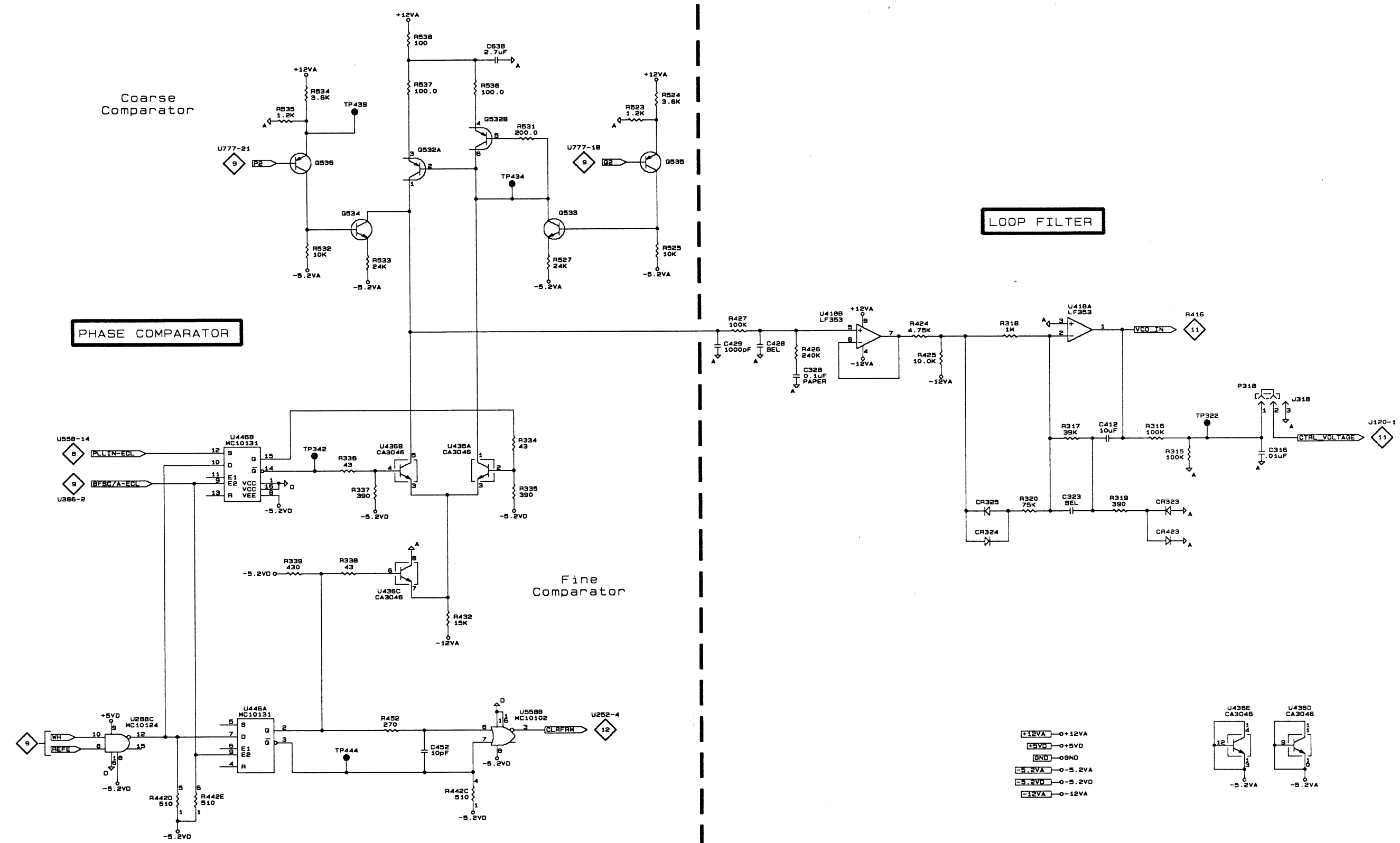
A B C D E F G H

Coarse
Comparator

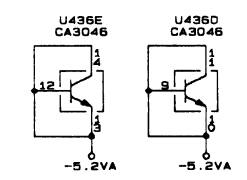
PHASE COMPARATOR

Fine
Comparator

LOOP FILTER



+12VA - +12VA
+5VD - +5VD
GND - GND
-5.2VA - -5.2VA
-5.2VD - -5.2VD
-12VA - -12VA



GENLOCK BOARD
 Schematic <11> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A2 Partial A2 also shown on Schematics 8, 9, 10, and 12.

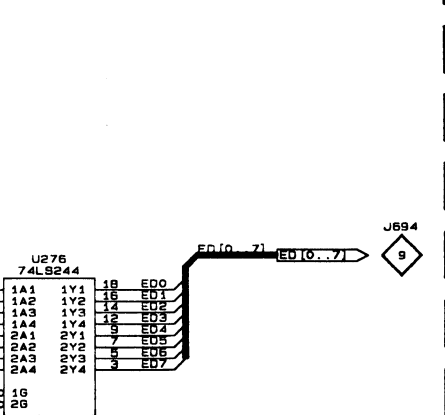
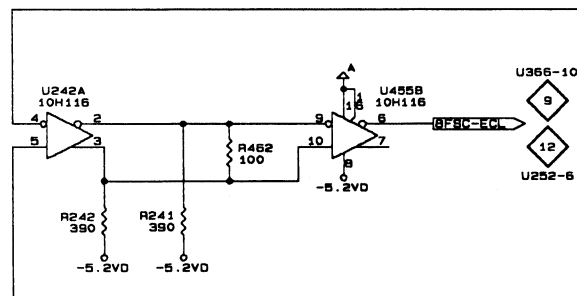
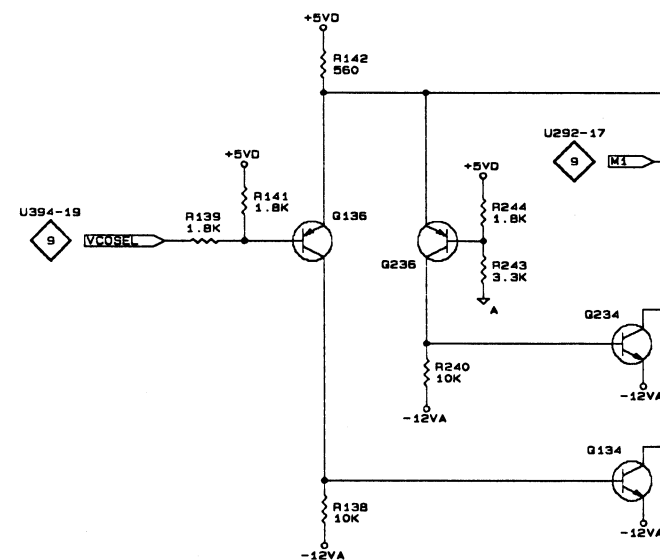
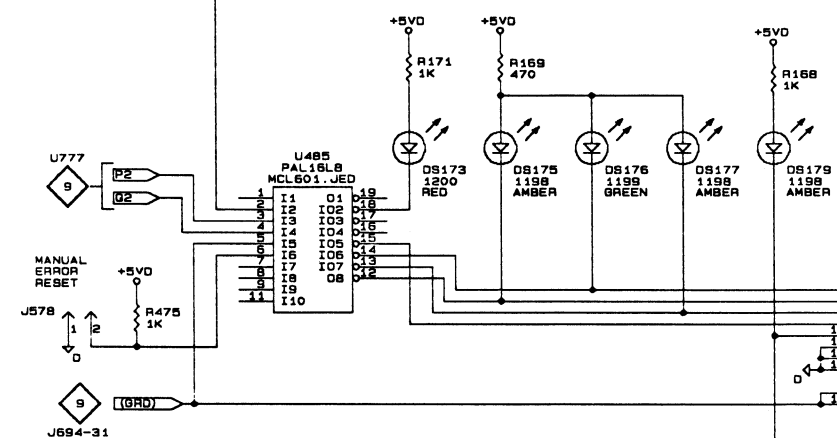
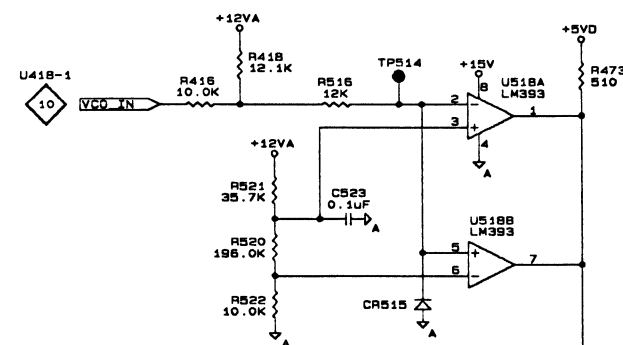
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
A2A1		TP514	B2	C7	H5
C312	E4	U242A	C2	C8	H5
C523	B2	U242B	E1	C9	G4
CR515	B2	U242C	E1	C10	H4
		U276	C3	C11	G4
		U455B	D2	C12	H4
DS173	B3	U485	B3	C13	H4
DS175	B3	U518A	B2	CR1	F4
DS176	B3	U518B	B2		
DS177	C3	A2A1A1		L1	G4
DS179	C3			L2	H4
J578	A3	C1	F2	P120	F4
		C2	G2		
Q134	C5	C3	G2	Q1	H4
Q136	B4	C4	G2	Q2	H4
Q146	C4	C5	G2		
Q234	C5	C6	H2	R1	F4
Q236	B4	C7	H2	R2	F5
		C8	H3	R3	H5
R138	B5	C9	G2	R4	H4
R139	A4	C10	H2	R5	H4
R141	A4	C11	G1	R6	H5
R142	B4	C12	H1	R7	G5
R143	C4			R8	H4
R144	C4	CR1	F2	R9	H4
R168	C3				
R169	B3	L1	G2		
R171	B3	L2	H1		
R211	E4				
R212	E4	Q1	H2		
R237	E4	Q2	H2		
R238	E1				
R239	D1	R1	F2		
R240	B5	R2	F2		
R241	D2	R3	H2		
R242	D2	R4	H2		
R243	B4	R5	H2		
R244	B4	R6	H2		
R245	D1	R7	G3		
R246	D1	R8	H2		
R416	A2	R9	H2		
R418	A1	A2A1A2			
R462	D2				
R473	B1	C1	F5		
R475	A3	C2	G4		
R516	B2	C4	G4		
R520	B2	C5	G4		
R521	B2	C6	H5		
R522	B2				

A B C D E F G H

+12VA - 0+12VA
 +5VD - 0+5VD
 GND - 0GND
 -5.2VA - 0-5.2VA
 -5.2VD - 0-5.2VD
 -12VA - 0-12VA

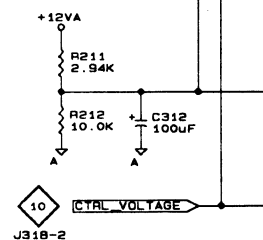
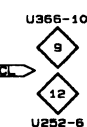
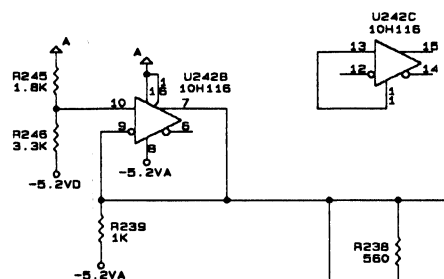
STATUS DECODER

VCO CONTROL



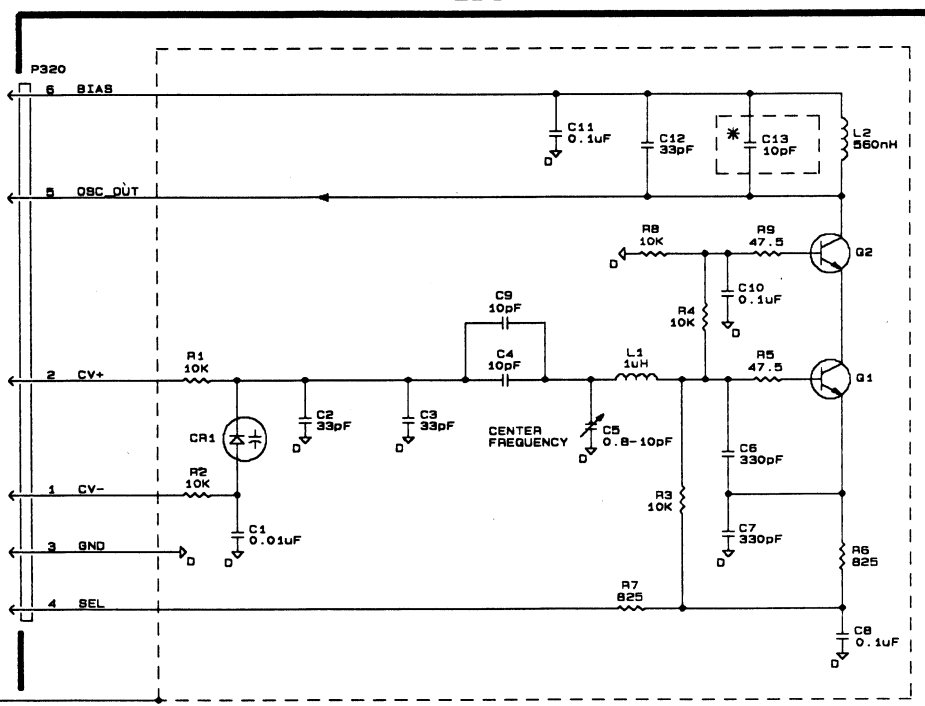
** NOTE: SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES

VCO CONTROL



671-0105-00 & UP
 P/D A2A1 - GENLOCK BOARD

EB1



GENLOCK BOARD
 Schematic <12> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A2 Partial A2 also shown on Schematics 8, 9, 10, and 11.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C179	F4	F830	B4
C192	G4		
C246	G5	J358	A1
C254	G4	J928	A4
C264	E2		
C266	E2	R262B	B2
C270	E2	R265	E2
C282	F4	R268	E2
C284	G4	R269	E2
C292	G4	R276	E3
C356	B1	R284	D1
C369	G4	R355	B1
C377	G4	R356	B1
C378	G4	R368A	C1
C385	G4	R368B	G2
C417	F5	R368C	G2
C423	H5	R368D	G2
C448	H4	R368E	G2
C463	H4	R368F	C2
C467	F5	R368G	G2
C472	H4	R368H	F2
C479	H4	R368I	C2
C517	G5	R458	B1
C545	F4	R833	A5
C551	G5	R839	B4
C552	G4		
C562	G5	TP145	E4
C579	G4	TP182	E4
C627	G5	TP324	E4
C652	G4	TP562	E4
C664	G4	TP614	F4
C679	H4	TP814	D5
C682	H4	TP816	D4
C733	H5	TP818	D5
C754	G4	TP822	B4
C764	G4	TP913	D4
C782	G4	TP917	D4
C811	C5	TP924	D4
C815	C5	TP926	D3
C816	G5		
C826	B4	U252A	B2
C827	B5	U264	F1
C832	A5	U278A	D2
C835	A5	U278B	D3
C838	A4	U278C	D2
C845	B4	U278D	D2
C912	C5	U376C	G1
C914	C4	U455A	C1
C916	C4	U824	B5
C923	C4	U828	B5
C925	C4	U922	B4
C930	C3	U949	B4
C934	G5		
C935	H5		
C936	B4		
C938	B3		

VM 700 SERVICE

ADC BOARD

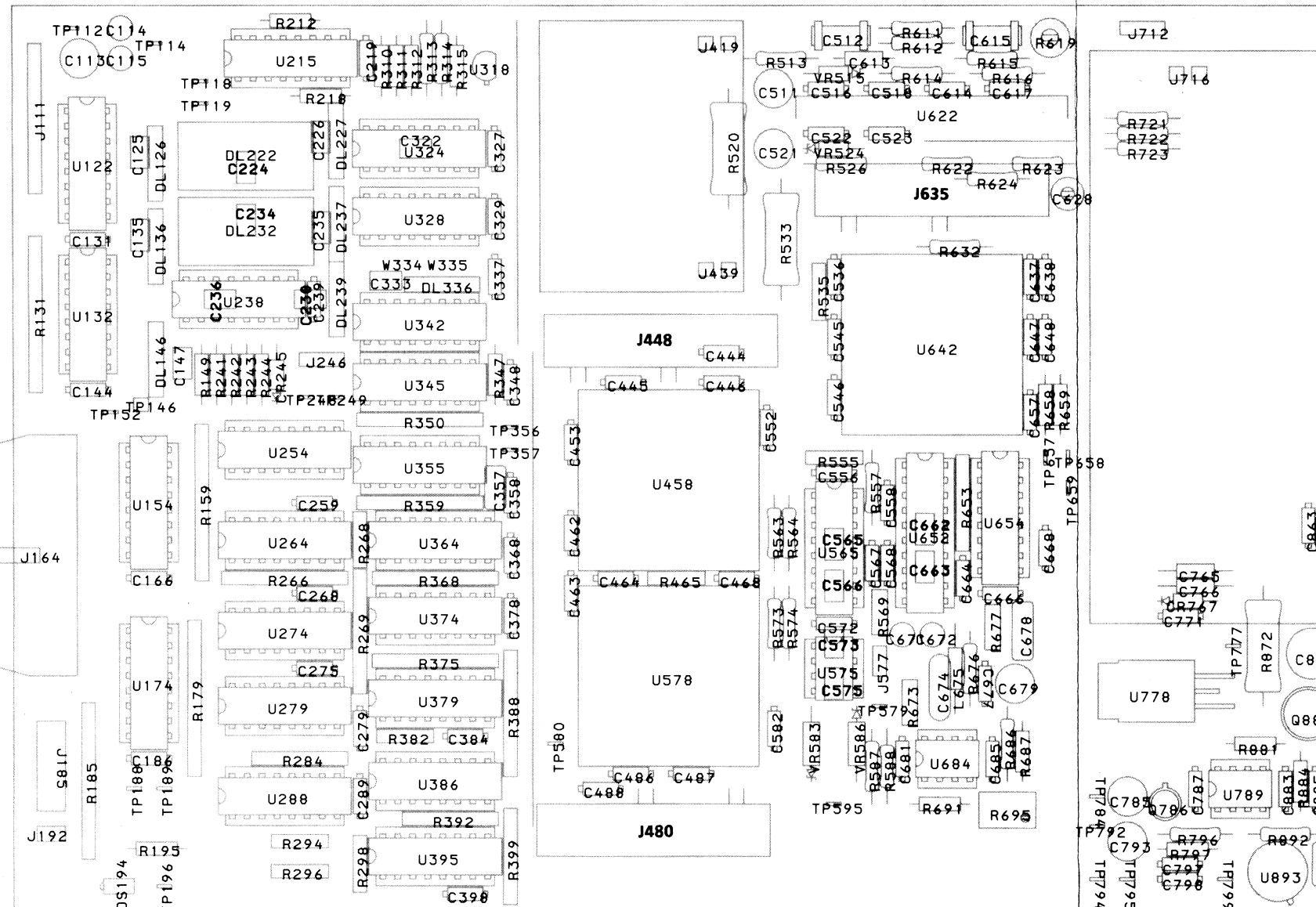
Schematic <13> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

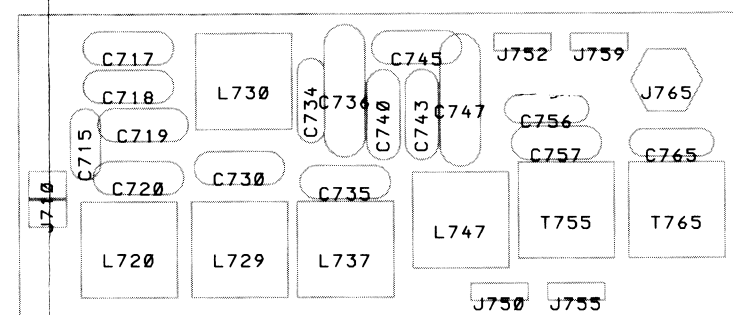
ASSEMBLY A3 Partial A3 also shown on Schematics 14, 15, and 16.

Circuit No	Schem Loc	Circuit No	Schem Loc	Circuit No	Schem Loc	Circuit No	Schem Loc
A3A1		C329	H4	CR888	C2	A3A1A1	
C131	G3	C337	H4	CR889	C2	C100	G5
C144	G3	C348	G4	F989	B1	C114	G5
C166	G3	C358	G4	F996	B1	C115	H5
C186	G3	C368	G4	J419	F5	C200	G5
C219	H3	C378	G4	J439	H5	C201	G5
C239	H3	C384	H4	J712	D5	C204	G5
C259	H3	C398	H4	J716	D4	C212	G5
C268	G4	C445	B3	J995	A1	J110	H5
C275	G4	C446	G3	Q786	G1	J112	H5
C279	G4	C453	G3	Q882	G2	J214	F5
C289	G4	C462	G3	Q966	C2	J216	F5
C327	H4	C463	G3	Q973	C2	L101	G5
		C464	C3			L105	G5
		C468	H4			L203	G5
		C488	H3			L211	G5
		C487	C3			A3A1A5	
		C511	F4			C715	C4
		C512	E5			C717	C4
		C516	E4			C718	C4
		C518	F4			C719	C4
		C521	D4			C720	C4
		C522	D4			C730	C4
		C523	E4			C734	C4
		C536	H3			C735	C4
		C545	C3			C736	B5
		C546	H3			C740	B5
		C613	F4			C743	B5
		C614	E4			C745	B4
		C615	E5			C747	A5
		C617	E4			C756	B4
		C628	E5			C757	B4
		C638	G3			C765	B4
		C647	C3			J710	D4
		C657	G3			J750	B5
		C662	G3			J752	B4
		C663	G3			J755	A5
		C664	H3			J759	A4
		C666	H3			J765	A4
		C668	H3			L720	C4
		C765	E2			L729	C4
		C766	E2			L730	B4
		C771	F2			L737	B5
		C785	H2			L747	
		C787	G1			T755	
		C793	G1			T765	
		C797	G1				
		C798	E1				
		C863	E1				
		C865	E1				
		C866	E1				
		C873	E2				
		C883	G1				
		C885	G2				
		C887	B1				
		C888	C2				
		C889	D2				
		C894	E1				
		C895	E1				
		C896	E1				
		C972	E1				
		C976	B1				
		C981	B2				
		C983	B2				
		C985	B2				
		C986	C2				
		C988	B1				
		C992	D2				
		C994	B1				
CR767	F2	VR515	E4				
CR864	F1	VR524	D4				

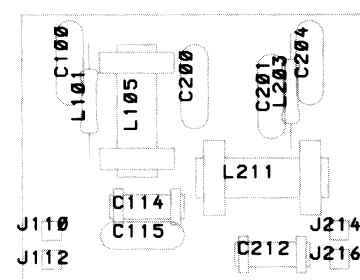
*See Parts Lists For Serial Number Range.



A3A1 ADC Board



A3A1A5 Antialiasing Filter Board



671-0110-00

A3A1A1 Video Delay Line Board

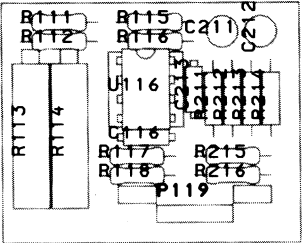
Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

ADC BOARD
 Schematic <14> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

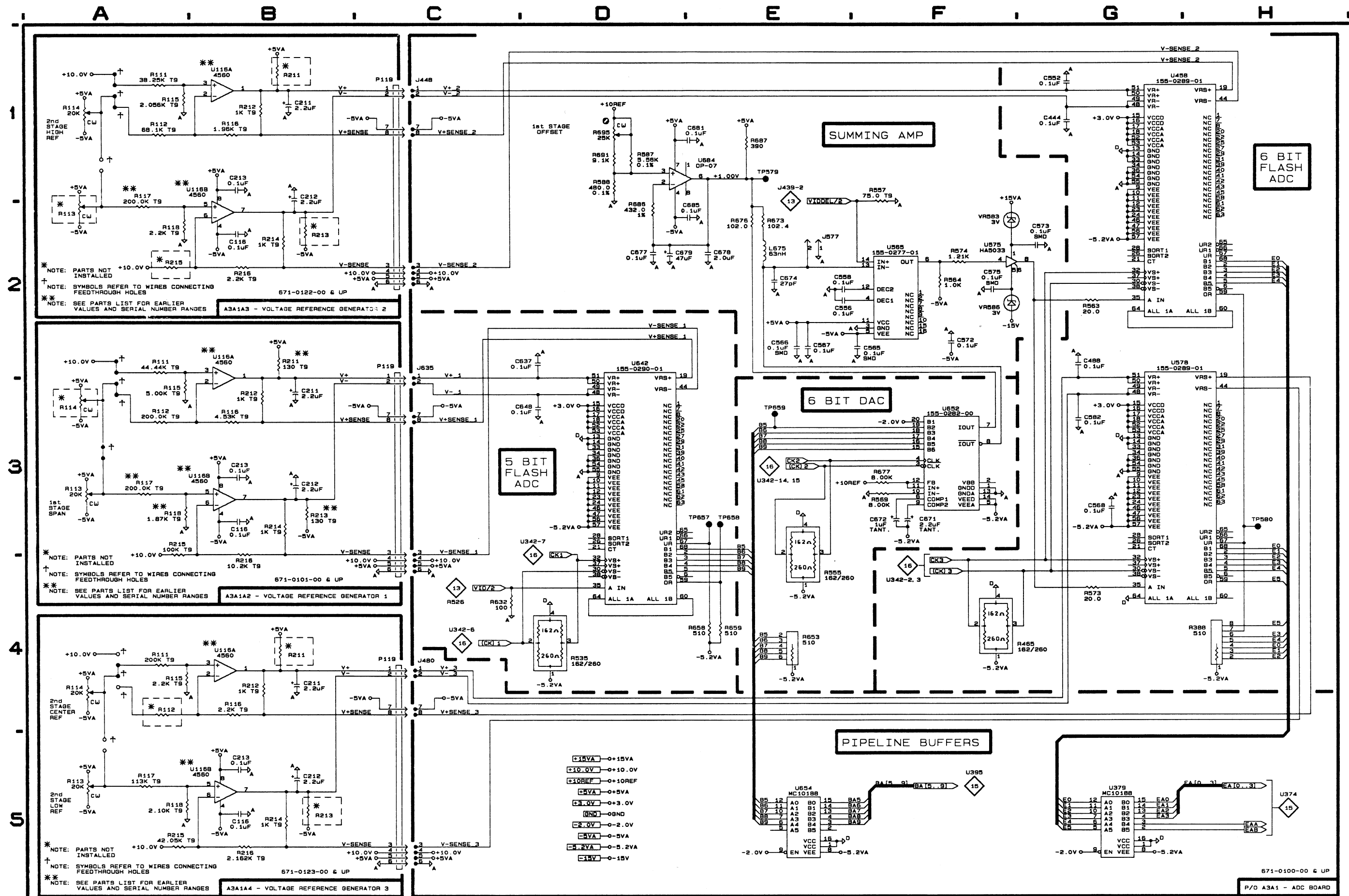
ASSEMBLY A3 Partial A3 also shown on Schematics 13, 15, and 16.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
A3A1		R695	D1	R115	A1
C444	G1	TP579	E1	R116	B1
C488	G2	TP580	H3	R117	A2
C552	G1	TP657	E3	R118	A2
C556	E2	TP658	E3	R211	B1
C558	E2	TP659	E3	R212	B1
C565	F2			R213	B2
C566	E2	U379	G5	R214	B2
C567	E2	U458	G1	R215	A2
C568	G3	U565	F2	R216	B2
C572	F2	U575	F2	U116A	B1
C573	G2	U578	G2	U116B	B2
C575	F2	U642	D2	A3A1A4	
C582	G3	U652	F3	C211	B4
C637	D2	U654	E5	C212	B5
C648	D3	U684	D1	C213	B5
C671	F3	VR583	F2	R111	A4
C672	F3	VR586	F2	R112	A4
C674	E2			R113	A5
C677	D2	A3A1A2		R114	A4
C678	E2	C211	B3	R115	A4
C679	D2	C212	B3	R116	B4
C681	E1	C213	B3	R117	A5
C685	E2	R111	A2	R118	A5
J448	C1	R112	A3	R211	B4
J480	C4	R113	A3	R212	B4
J577	E2	R114	A3	R213	B5
J635	C2	R115	A3	R214	B5
L675	E2	R116	B3	R215	A5
R388	H4	R117	A3	R216	B5
R465	F4	R118	A3	U116A	B4
R535	D4	R211	B2	U116B	B5
R555	E3	R212	B3		
R557	F1	R213	B3		
R563	G2	R214	B3		
R564	F2	R215	A3		
R569	F3	R216	B3		
R573	G4	U116A	B2		
R574	F2	U116B	B3		
R587	D1				
R588	D1	A3A1A3			
R632	C4	C211	B1		
R653	E4	C212	B1		
R658	E4	C213	B1		
R659	E4				
R673	E2	R111	A1		
R676	E2	R112	A1		
R677	F3	R113	A2		
R686	D2	R114	A1		
R687	E1				
R691	D1				



A3A1A2, A3, A4
 REF GEN Boards
 671-0101-00 - 02
 671-0122-00,01
 671-0123-00,01

⚡ Static Sensitive Devices
 See the section in this manual
 on handling precautions for
 static sensitive components.



ADC BOARD
Schematic <15> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A3 Partial A3 also shown on Schematics 13. 14. and 16.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C357	E3	R368B	C5
CR245	E4	R368C	C5
DS194	H3	R368D	C5
J164	H3	R368E	C5
J185	H2	R368F	F5
J192	H3	R368G	F5
J246	E4	R375	C3
R159E	G4	R382	A4
R185	G4	R392	B5
R195	H3	R399	A5
R244	E4	TP248	F3
R266	G3	TP249	F3
R268	C3	TP356	F2
R269	D2	TP357	E2
R284	G3	U254A	G4
R294	F5	U254B	G4
R296	F5	U264A	G1
R298	B5	U264B	G1
R347	E3	U274A	G2
R350A	D5	U274B	G1
R350B	F3	U279A	G3
R350C	C5	U279B	G2
R350D	D5	U288A	G3
R350E	A2	U288B	G3
R350F	F3	U345	E3
R350G	F3	U355	E4
R359A	D5	U364	D4
R359B	D3	U374	D3
R359C	D3	U386	B4
R359D	D5	U395	A4
R359E	F4		
R359F	D5		
R359G	F4		
R368A	C5		

ADC BOARD
 Schematic <16> Look-Up Chart

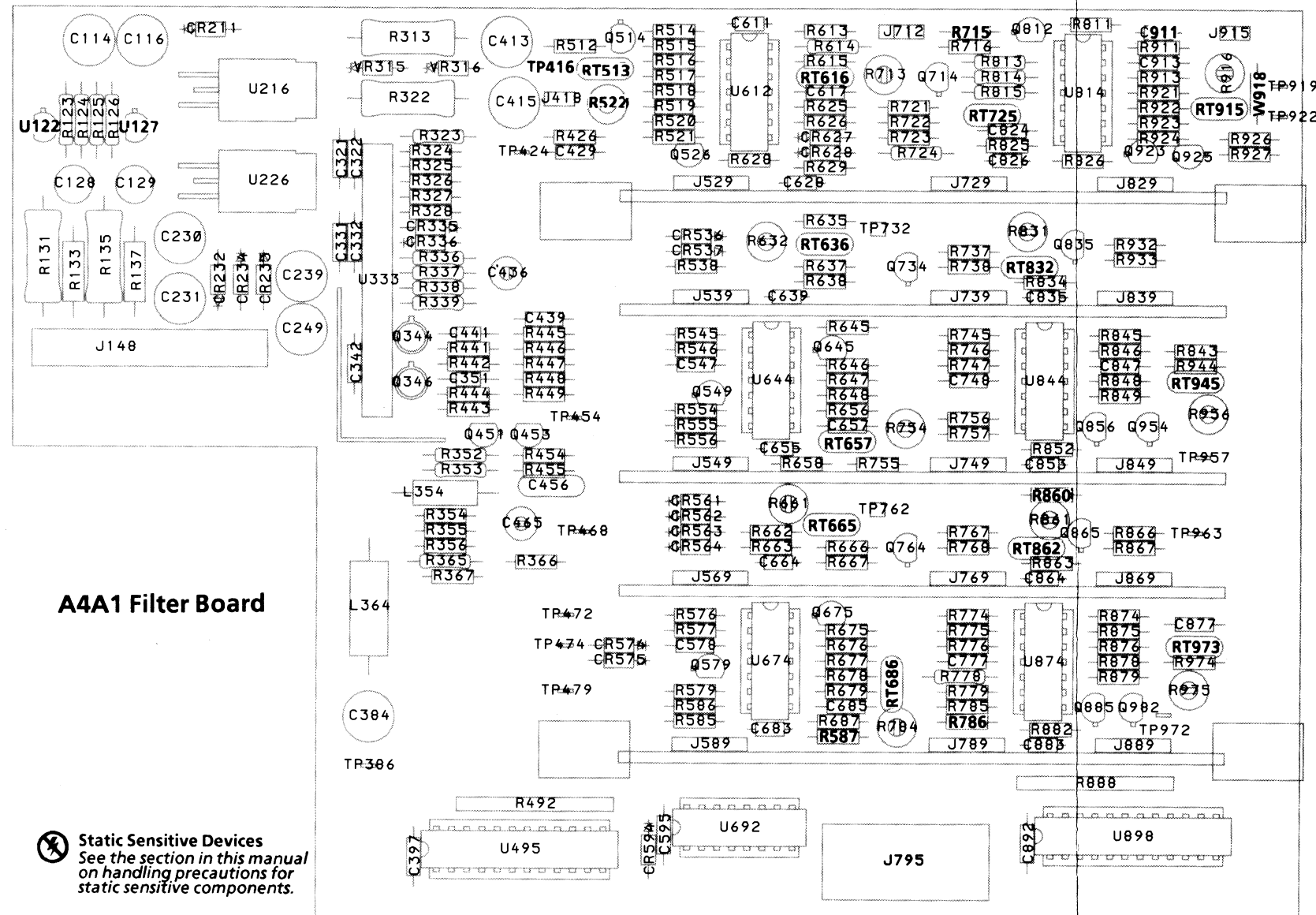
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A3 Partial A3 also shown on Schematics 13, 14, and 15.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C113	A5	TP114	B2
C114	B5	TP118	B1
C115	B5	TP119	B3
C125	C5	TP146	H4
C135	C5	TP152	G1
C147	C5	TP188	G1
C224	D5	TP189	G2
C226	D5		
C234	D5	U122A	C1
C235	D5	U122B	C2
C236	H4	U132A	D1
C238	E5	U132B	E1
C322	E5	U154A	F1
C333	E5	U154B	G1
		U174A	G1
DL126	E4	U174B	G2
DL136	B4	U215A	B2
DL146	G4	U215B	B1
DL222	D4	U215C	B2
DL227	C4	U215D	B2
DL232	B4	U238A	H4
DL237	D4	U238B	H3
DL239	G4	U238C	H3
DL336	F4	U318	B5
		U324A	E4
J111	A1	U324B	B3
		U324C	C4
R131A	B2	U328A	F4
R131B	B1	U328B	F4
R131G	C1	U328C	D4
R131H	D1	U342A	F3
R149	C4	U342B	B3
R159A	H4	U342C	D3
R159B	H1		
R159C	H1	W334	D3
R159D	H4	W335	C3
R159G	F1		
R159H	E1		
R179A	H2		
R179B	H2		
R179C	H2		
R179D	H2		
R179F	F2		
R179H	F2		
R212	B2		
R218	B1		
R241	B3		
R242	E4		
R243	G4		
R310	E4		
R311	C4		
R312	F4		
R313	B5		
R314	B5		
R315	A3		

FILTER BOARD

Schematic <17> Look-Up Chart



The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

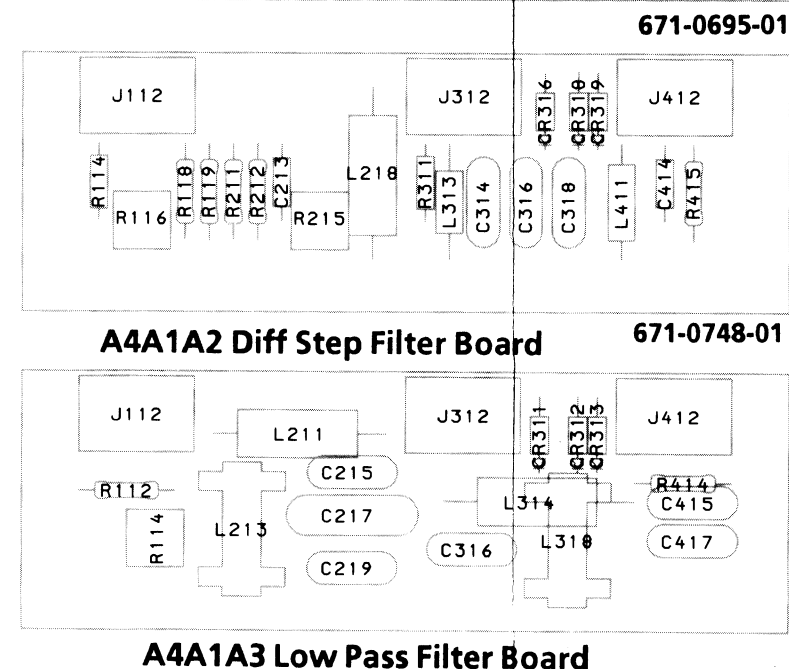
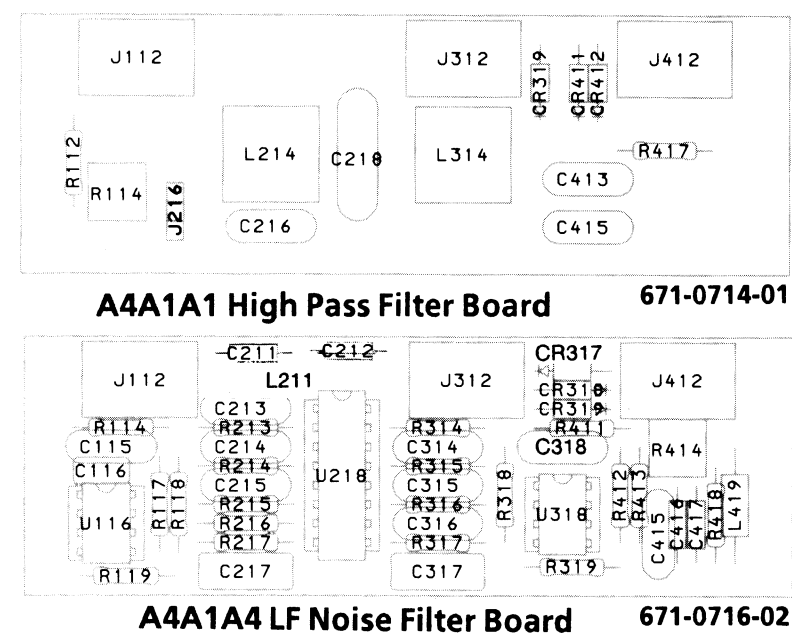
ASSEMBLY A4 *Partial A4 also shown on Schematics 18 and 19.*

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C321	H3	R352	G5	R922	D3
C322	G3	R353	F5	R923	D2
C331	H3	R354	F5	R924	D2
C332	G3	R355	E4	R926	C3
C342	G3	R356	E4	R927	C3
C351	F4	R365	G3		
C413	G3	R366	F3	RT513	F1
C415	H3	R367	E4	RT616	F3
C436	F5	R426	F2	RT725	D1
C439	G4	R441	E4	RT915	D3
C441	F4	R442	F4		
C456	F5	R443	E4	TP424	G4
C465	F5	R444	E4	TP922	C2
C611	F1	R445	G4		
C628	F2	R446	G4	U333	G3
C826	D2	R447	F4	U495	C5
C911	D1	R448	E4	U612A	F1
		R449	E4	U612B	F2
CR335	G4	R454	E4	U692	B4
CR336	G5	R455	E4	U814A	D1
CR594	B5	R492	D5	U814B	D2
CR627	E3	R512	F1	U898	B3
CR628	E2	R514	F1		
		R515	F1	VR315	H3
J418	H4	R516	G1	VR316	G3
J529	E2	R517	F1		
J712	C1	R518	G1		
J729	E3	R519	F2		
J795	A3	R520	F2		
J829	E2	R521	F3		
J915	A1	R522	F1		
		R613	F1		
L354	F5	R614	E1		
		R615	F3		
Q344	F4	R625	F3		
Q346	F4	R626	F3		
Q451	E4	R628	F2		
Q453	E4	R629	F3		
Q514	F1	R713	F3		
Q526	F2	R715	D1		
Q714	D1	R716	E1		
Q812	D1	R721	C1		
Q923	D2	R722	C1		
Q925	C2	R723	C1		
		R724	D1		
R313	G2	R778	B1		
R322	H3	R811	D1		
R323	G4	R813	D1		
R324	G4	R814	D1		
R325	G4	R815	E1		
R326	G5	R825	D2		
R327	G5	R826	C2		
R328	G4	R888	B4		
R336	F4	R911	C1		
R337	F4	R913	D3		
R338	F4	R916	D3		
R339	G5	R921	C3		

NOTE

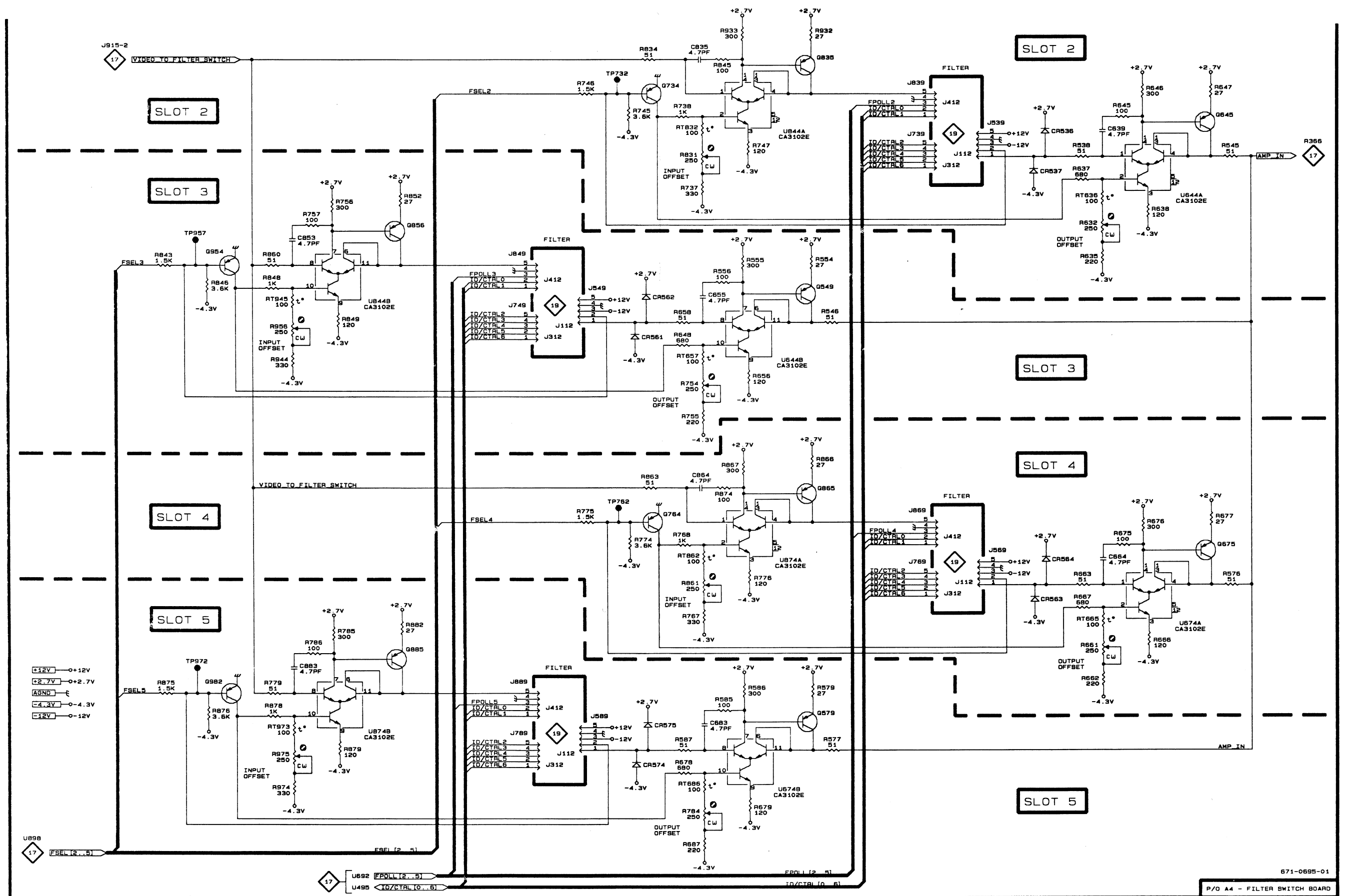
**See 671-0716-00 for 671-0716-01
part locations.**

671-0715-01



A B C D E F G H

1
2
3
4
5



FILTER BOARD
Schematic <19> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A4 Partial A4 also shown on Schematics 17 and 18.

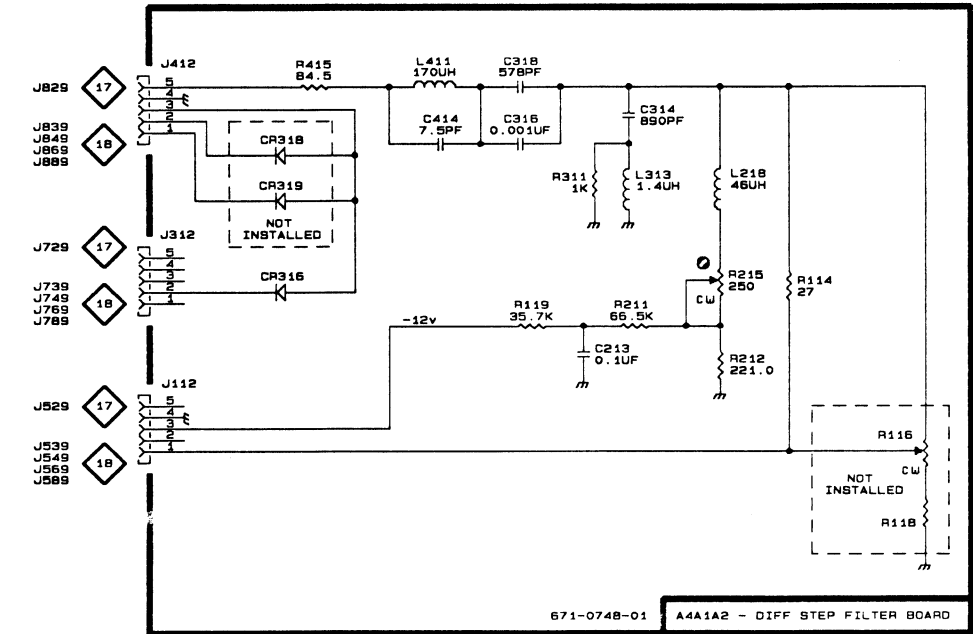
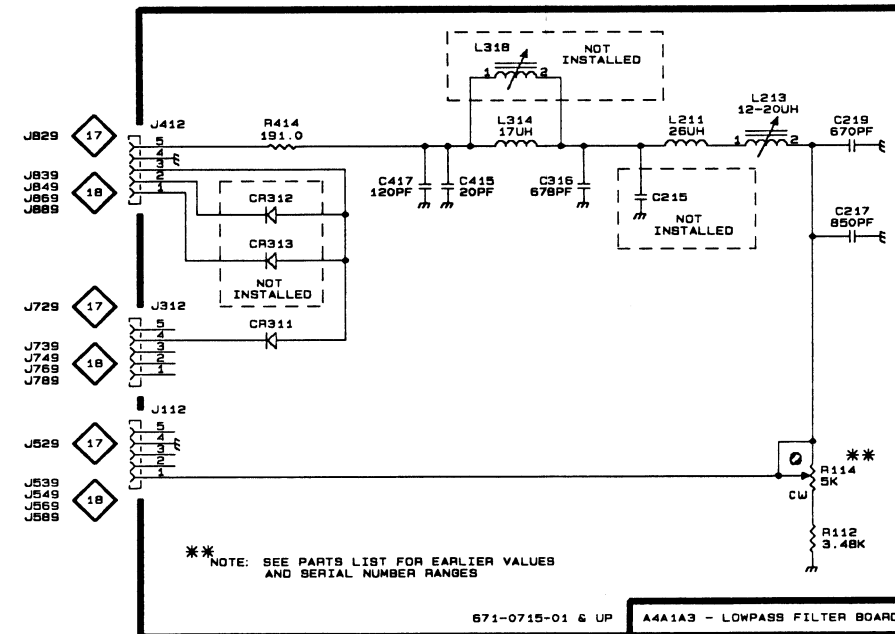
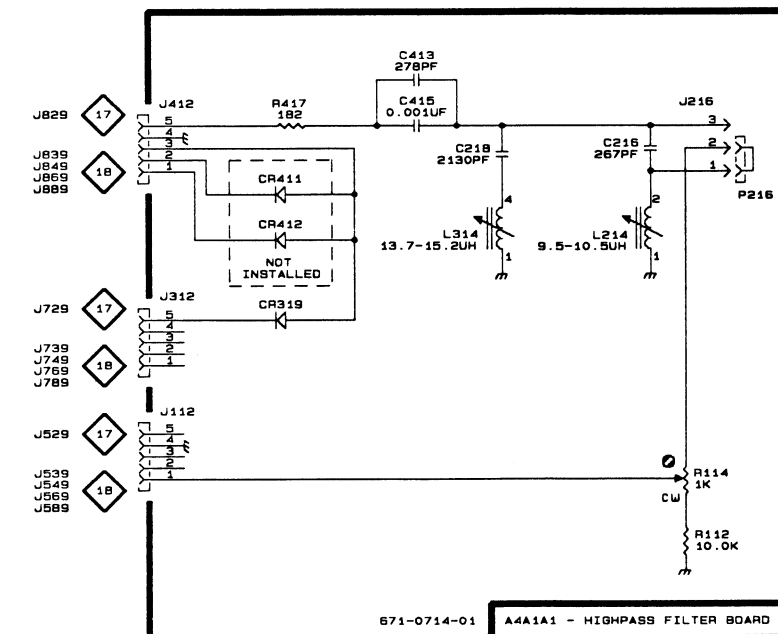
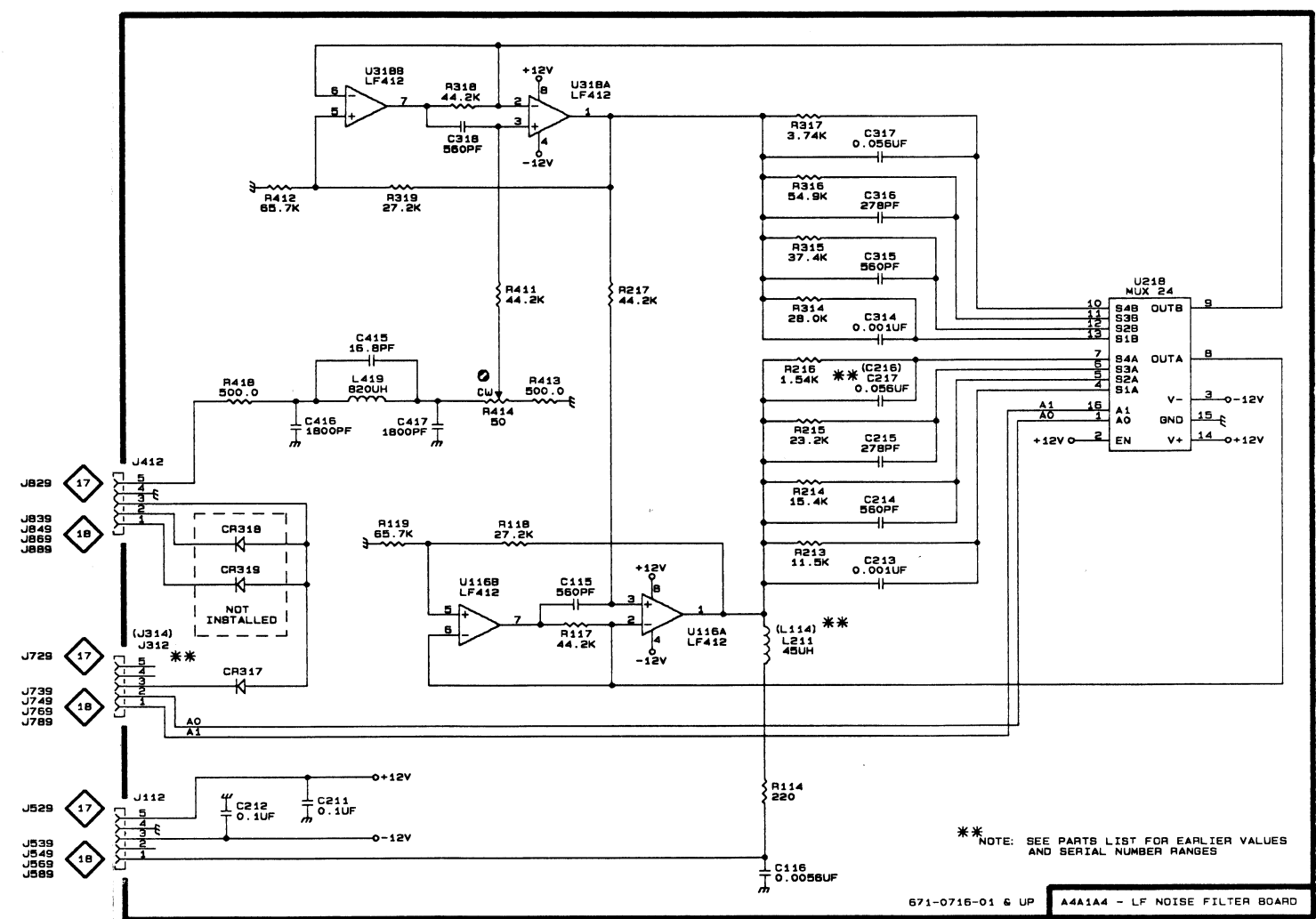
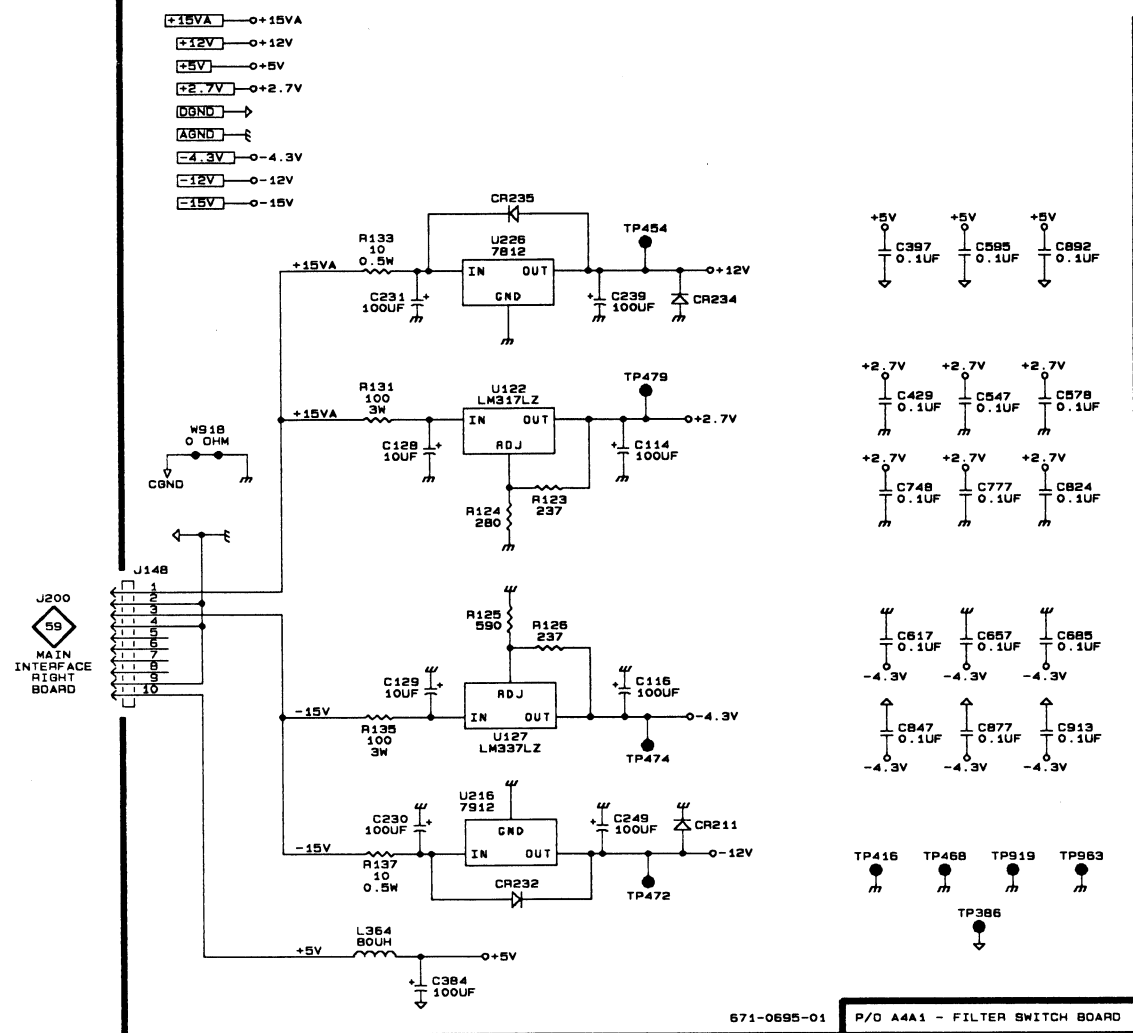
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
A4A1		C413	B4	L211	E4
C114	B2	C415	B4	L213	E4
C116	B3	CR319	A5	L314	D4
C128	B2	CR411	A4	L318	D4
C129	B3	CR412	A4	R112	E5
C230	B3	J112	A5	R114	E5
C231	B1	J216	C4	R414	D4
C239	B1	J312	A5	A4A1A2	
C249	B3	J412	A4	C115	F2
C384	B3	L214	B4	C116	G3
C397	C1	L314	B4	C211	E3
C429	C2	R112	C5	C212	E3
C547	C2	R114	B5	C213	G2
C578	D2	R417	A4	C214	G2
C595	C1	A4A1A2		C215	G2
C617	C2	C213	G5	C217	G2
C657	C2	C314	G4	C314	G2
C685	D2	C316	G4	C315	G1
C748	C2	C318	G4	C316	G1
C777	C2	C414	G4	C317	G1
C824	D2	CR316	F4	C318	F1
C847	C3	CR318	F4	C415	E2
C877	C3	CR319	F4	C416	E2
C892	D1	J112	F5	C417	F2
C913	D3	J312	F4	CR317	E3
CR211	C3	J412	F4	CR318	E2
CR232	B3	L218	H4	CR319	E2
CR234	C1	L313	G4	J112	E3
CR235	B1	L411	G4	J312	E3
J148	A2	R114	H4	J412	E2
L364	B3	R116	H5	L211	G3
R123	B2	R118	H5	L419	E2
R124	B2	R119	G5	R114	G3
R125	B2	R211	G5	R117	F3
R126	B2	R212	H5	R118	F2
R131	B2	R215	H4	R119	E2
R133	B1	R311	G4	R213	G2
R135	B3	R415	F4	R214	G2
R137	B3	A4A1A3		R215	G2
TP386	C3	C215	E4	R216	G2
TP416	C3	C217	E4	R217	F2
TP454	B1	C219	E4	R314	G2
TP468	C3	C316	E4	R315	G1
TP472	B3	C415	D4	R316	G1
TP474	B3	C417	D4	R317	G1
TP479	B2	CR311	D5	R318	F1
TP919	C3	CR312	D4	R319	E1
TP963	D3	CR313	D4	R411	F2
U122	B2	J112	C5	R412	E1
U127	B3	J312	C5	R413	F2
U216	B3	J412	C4	R414	F2
U226	B1	A4A1A1		R418	E2
W918	A2	C216	B4	U116A	F2
A4A1A1		C218	B4	U116B	F3
				U218	H2
				U318A	F1
				U318B	E1

FILTER BOARD
Schematic <18> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A4 Partial A4 also shown on Schematics 17 and 19.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C639	G1	R635	G2	R932	E1
C655	E2	R637	G1	R933	E1
C664	G4	R638	G2	R944	B2
C683	E4	R645	G1	R956	B2
C835	E1	R646	G1	R974	B5
C853	B2	R647	H1	R975	B5
C864	E3	R648	E2		
C883	B4	R656	E3	RT636	G2
		R658	E2	RT657	E2
CR536	G1	R661	G4	RT665	G4
CR537	G1	R662	G4	RT686	E5
CR561	D2	R663	G4	RT832	E1
CR562	D2	R666	G4	RT862	E4
CR563	G4	R667	G4	RT945	B2
CR564	G4	R675	G3	RT973	B4
CR574	D5	R676	G3		
CR575	D4	R677	H3	TP732	D1
		R678	E5	TP762	D3
J539	F1	R679	E5	TP957	B2
J549	D2	R687	E5	TP972	B4
J569	F4	R737	E2		
J589	D4	R738	E1	U644A	G1
J739	F1	R745	D1	U644B	E2
J749	D2	R746	D1	U674A	G4
J769	F4	R747	E1	U674B	E5
J789	D5	R754	E3	U844A	E1
J839	F1	R755	E3	U844B	B2
J849	D2	R756	C2	U874A	E3
J869	F3	R757	B2	U874B	B4
J889	D4	R767	E4		
		R768	E3		
Q549	E2	R774	D3		
Q579	E4	R775	D3		
Q645	H1	R776	E4		
Q675	H3	R779	B4		
Q734	D1	R784	E5		
Q764	D3	R784	B4		
Q835	E1	R785	C4		
Q856	C2	R831	E1		
Q865	E3	R834	D1		
Q885	C4	R843	B2		
Q954	B2	R845	E1		
Q982	B4	R846	B2		
		R848	B2		
R538	G1	R849	C2		
R545	H1	R852	C2		
R546	E2	R860	B2		
R554	E2	R861	E4		
R555	E2	R863	D3		
R556	E2	R866	E3		
R576	H4	R867	E3		
R577	E5	R874	E3		
R579	E4	R875	B4		
R585	E4	R876	B4		
R586	E4	R878	B4		
R587	E5	R879	C5		
R632	G2	R882	C4		



FILTER BOARD Schematic <17> Look-Up Chart

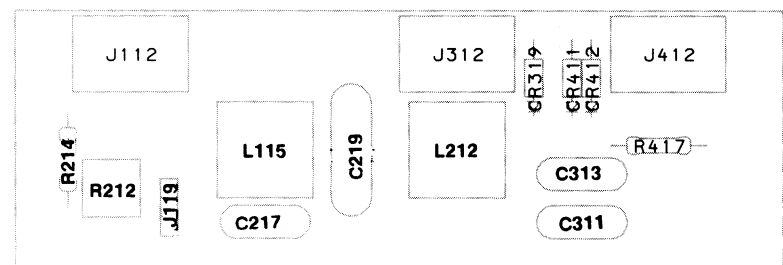
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A4 Partial A4 also shown on Schematics 18 and 19.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C314	G3	R337	F4	U495	C5
C318	H3	R352	F4	U612A	F1
C331	H3	R353	F4	U612B	F2
C332	G3	R355	E4	U692	B4
C419	F1	R356	E4	U814A	D1
C427	F2	R357	E4	U814B	D2
C432	G3	R415	F1	U898	B3
C434	F4	R416	F2		
C455	F5	R417	F1		
C715	D1	R418	F1		
C934	D2	R425	F2		
		R426	F2		
CR325	G4	R441	E4		
CR331	G4	R442	F4		
CR594	B5	R443	E4		
CR616	F3	R444	F4		
CR617	F3	R445	E4		
CR627	E3	R452	E4		
CR628	E2	R453	E4		
CR724	D2	R492	D5		
CR727	D1	R514	G1		
CR912	D3	R516	F1		
CR914	D3	R517	G1		
		R518	F1		
J415	H4	R526	F2		
J712	C1	R527	F3		
J795	A3	R615	E1		
J915	A1	R625	F3		
		R626	F3		
L354	F4	R714	F3		
		R716	D1		
P528A	E2	R717	D1		
P528B	E3	R718	D1		
P528C	E2	R719	E1		
		R721	C1		
Q344	F4	R722	C1		
Q346	F4	R723	C1		
Q444	E4	R725	D1		
Q446	E4	R728	D1		
Q514	F1	R812	E1		
Q526	F2	R832	D2		
Q714	D1	R836	D2		
Q812	E1	R888	B4		
Q923	D2	R911	B1		
Q924	C2	R916	D3		
		R921	C3		
R321	G3	R922	D3		
R322	H3	R923	D2		
R323	G4	R926	C3		
R324	G4	R927	C3		
R325	G4				
R326	G4	RT416	F1		
R332	G4				
R333	G4	TP424	G4		
R334	F4	TP925	C2		
R335	F4				
R336	F4	U333	G3		

A4A1 Filter Board

 **Static Sensitive Devices**
See the section in this manual on handling precautions for static sensitive components.



FILTER BOARD
 Schematic <18> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A4 Partial A4 also shown on Schematics 17 and 19.

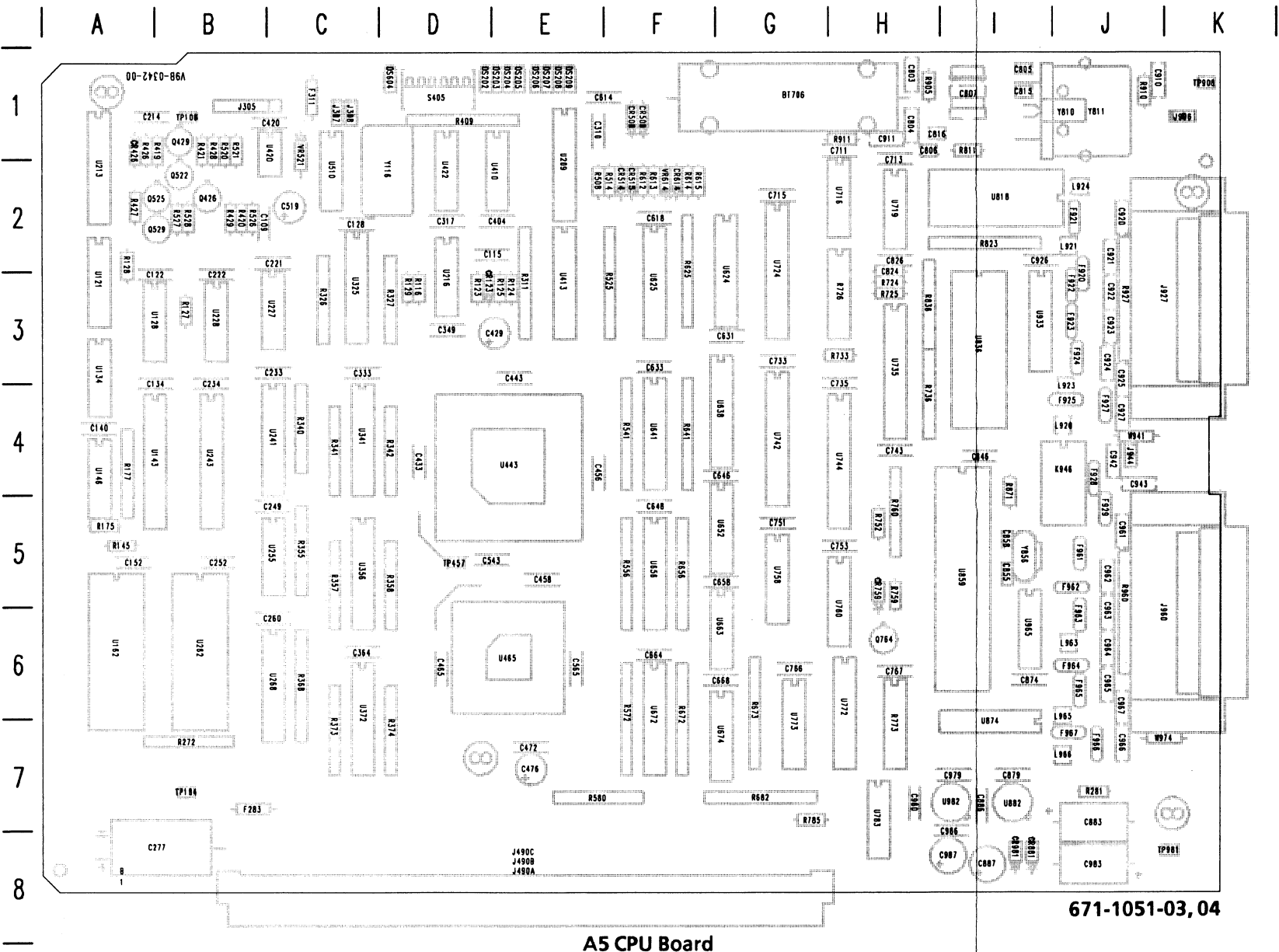
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C541	E2	R448	E3	R879	C5
C571	E4	R477	E5	R885	C4
C655	G1	R542	E2	R956	B2
C679	G3	R545	E2	R975	B5
C749	C2	R546	E2		
C778	C4	R547	E2	RT637	G2
C837	E1	R548	H1		
C865	E3	R555	E2	TP732	D1
		R572	E5	TP762	D3
CR537	G1	R576	E4	TP942	B2
CR538	G1	R577	E4	TP972	B4
CR543	E2	R578	E5		
CR544	E3	R579	H4	U644A	G1
CR561	D2	R585	E4	U644B	E2
CR562	D2	R632	G2	U674A	G4
CR563	G4	R636	G2	U674B	E5
CR564	G4	R638	G1	U844A	E1
CR573	E5	R639	G2	U844B	B2
CR574	E5	R645	H1	U874A	E3
CR575	D5	R647	G1	U874B	B4
CR581	D5	R648	G1		
CR666	G4	R656	E3		
CR667	G4	R662	G4		
CR736	E2	R668	G4		
CR737	E1	R669	G4		
CR765	E4	R675	H3		
CR766	E4	R677	G3		
CR943	B2	R678	G3		
CR944	B2	R685	E5		
CR973	B5	R738	E1		
CR974	B5	R745	D1		
		R746	D1		
P538A	F1	R747	E1		
P538B	F1	R755	C2		
P538C	F1	R756	C2		
P558A	D2	R767	E4		
P558B	D2	R774	D3		
P558C	D2	R775	D3		
P568A	F4	R776	E4		
P568B	F4	R779	C4		
P568C	F3	R785	C4		
P578A	D4	R834	E1		
P578B	D5	R835	E1		
P578C	D4	R838	E1		
		R839	E1		
Q555	E2	R845	B2		
Q585	E4	R846	B2		
Q645	H1	R848	B2		
Q675	H3	R849	C2		
Q734	D1	R856	C2		
Q764	D3	R861	E4		
Q835	E1	R864	E3		
Q856	C2	R866	E3		
Q864	E3	R867	E3		
Q885	C4	R875	B4		
Q954	B2	R876	B4		
Q982	B4	R878	B4		


FILTER BOARD
Schematic <19> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A4 Partial A4 also shown on Schematics 17 and 18.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
A4A1		J412	A4	A4A1A4	
C116	B2	L115	B4	C115	F2
C118	B2	L212	B4	C116	G3
C126	B3			C211	E3
C128	B2	R212	B5	C212	E3
C236	B2	R214	C5	C213	G2
C238	B2	R415	A4	C214	G2
C382	B3	A4A1A2		C215	G2
C397	C1	C213	G5	C216	G2
C519	C2	C314	G4	C314	G2
C549	C2	C316	G4	C315	G1
C579	C2	C318	G4	C316	G1
C595	C1	C414	G4	C317	G1
C618	C2	CR316	F4	C318	F1
C646	C2	CR318	F4	C415	E2
C676	C2	CR319	F4	C416	E2
C726	C2	J112	F5	C417	F2
C748	C2	J314	F4	CR317	E3
C777	C2	J412	F4	CR318	E2
C847	C3	L218	H4	CR319	E2
C877	C3	L313	G4	J112	E3
C892	C1	L411	G4	J314	E3
C913	C3	R114	H4	J412	E2
CR122	C2	R116	H5	L419	E2
CR124	B3	R118	H5	R114	G3
CR138	B2	R119	G5	R117	F3
CR139	C2	R211	G5	R118	F2
J148	A2	R212	H5	R119	E2
L364	B3	R215	H4	R213	G2
R131	B2	R311	G4	R214	G2
R133	B2	R415	F4	R215	G2
R135	B3	A4A1A3		R216	G2
R137	B3	C215	E4	R217	F2
TP386	C3	C217	E4	R314	G2
TP412	C3	C219	E4	R315	G1
TP552	C3	C316	E4	R316	G1
TP918	C3	C415	D4	R317	G1
TP963	D3	C417	D4	R318	F1
U216	B2	CR311	D5	R319	E1
U232	B2	CR312	D4	R411	F2
VR121	B2	CR313	D4	R412	E1
VR123	B3	J112	C5	R413	F2
A4A1A1		J312	C5	R414	F2
C217	B4	J412	C4	R418	E2
C219	B4	L211	E4	U116A	F2
C311	B4	L213	E4	U116B	F3
C313	B4	L314	D4	U218	H2
CR319	A5	L318	D4	U318A	F1
CR411	A4	R112	E5	U318B	E1
CR412	A4	R114	E5		
J112	A5	R414	D4		
J119	C4				
J312	A5				



 **Static Sensitive Devices**
See the section in this manual
on handling precautions for
static sensitive components.

CPU BOARD

Schematic <20> Look-Up Chart
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 21, 22, 23, 24, 25, 26, and 27.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C420	B4	B1	R429	E4	B2
C519	B4	C2	R514	E4	F2
			R520	D5	B1
CR123	B2	D2	R521	D4	B1
CR426	D5	A1	R526	C4	B2
CR514	E4	F2	R527	E5	B2
CR515	E4	F2	R528	E5	B2
DS604	D3	D1	U146A	F2	A4
			U146B	F2	A4
F311	H4	C1	U146C	E2	A4
			U146D	F2	A4
J305	H4	B1	U216A	A1	D2
			U216B	B1	D2
Q426	C5	B2	U227A	F1	C3
Q429	D5	B1	U227B	F1	C3
Q522	E4	B2	U228A	D1	B3
Q525	E4	A2	U228B	F1	B3
Q529	E5	A2	U410D	G5	E1
			U410E	G5	E1
R116	A1	D3	U420	B4	C1
R123	B2	D3	U422A	F5	D1
R124	B2	E3	U422B	G5	D1
R125	B2	E3	U422C	D4	D1
R127	F2	B3	U422D	C5	D1
R129	B2	D3	U422E	E5	D1
R177A	F2	A4	U422F	E5	D1
R177B	F2	A4	U443	C1	E4
R177C	F2	A4	U510A	F3	C1
R177D	F1	A4	U510B	E3	C1
R311E	E4	E2	U510C	E3	C1
R419	D4	B1	U510D	E3	C1
R420	C5	B2	U663A	D1	G6
R421	C5	B1	U716A	F5	H2
R426	C5	A1			
R427	C5	A2	VR521	E5	C1
R428	C5	B1			
			Y116	A1	D1

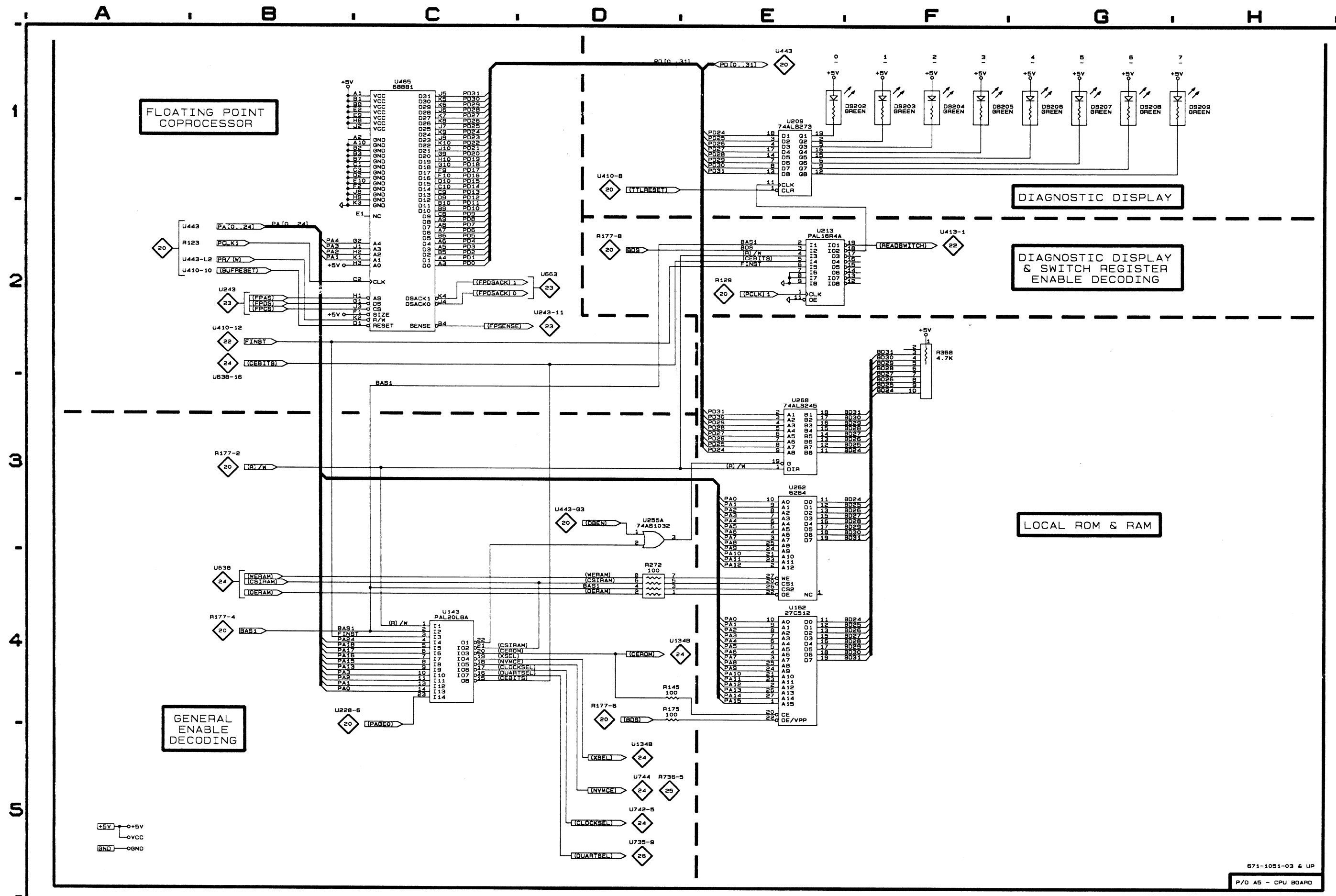
CPU BOARD

Schematic <21> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 22, 23, 24, 25, 26, and 27.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
DS202	E1	D1
DS203	F1	E1
DS204	F1	E1
DS205	F1	E1
DS206	G1	E1
DS207	G1	E1
DS208	G1	E1
DS209	G1	E1
R145	D4	A5
R175	D4	A5
R272	D4	B7
R368	F2	C6
U143	C4	A4
U162	E4	A6
U209	E1	E1
U213	E2	A1
U255A	D3	C5
U262	E3	B6
U268	E3	C6
U465	C1	E6



CPU BOARD
Schematic <22> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 *Partial A5 also shown on Schematics 20, 21, 23, 24, 25, 26, and 27.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R311A	E3	E2
R311B	D3	E2
R311C	E3	E2
R409	A3	D1
R525	F1	F2
R541	F2	F4
R556	F3	F5
R572	F4	F6
R615	E2	F2
R625	G1	F2
R641	G2	F4
R656	G3	F5
R672	G4	F6
S405	A3	D1
U227C	C1	C3
U228C	D2	B3
U410A	B3	E1
U410B	B3	E1
U410C	B4	E1
U410F	B3	E1
U413	E4	E2
U624	E2	G2
U625	G1	F2
U641	G2	F4
U656	G3	F5
U672	G4	F6

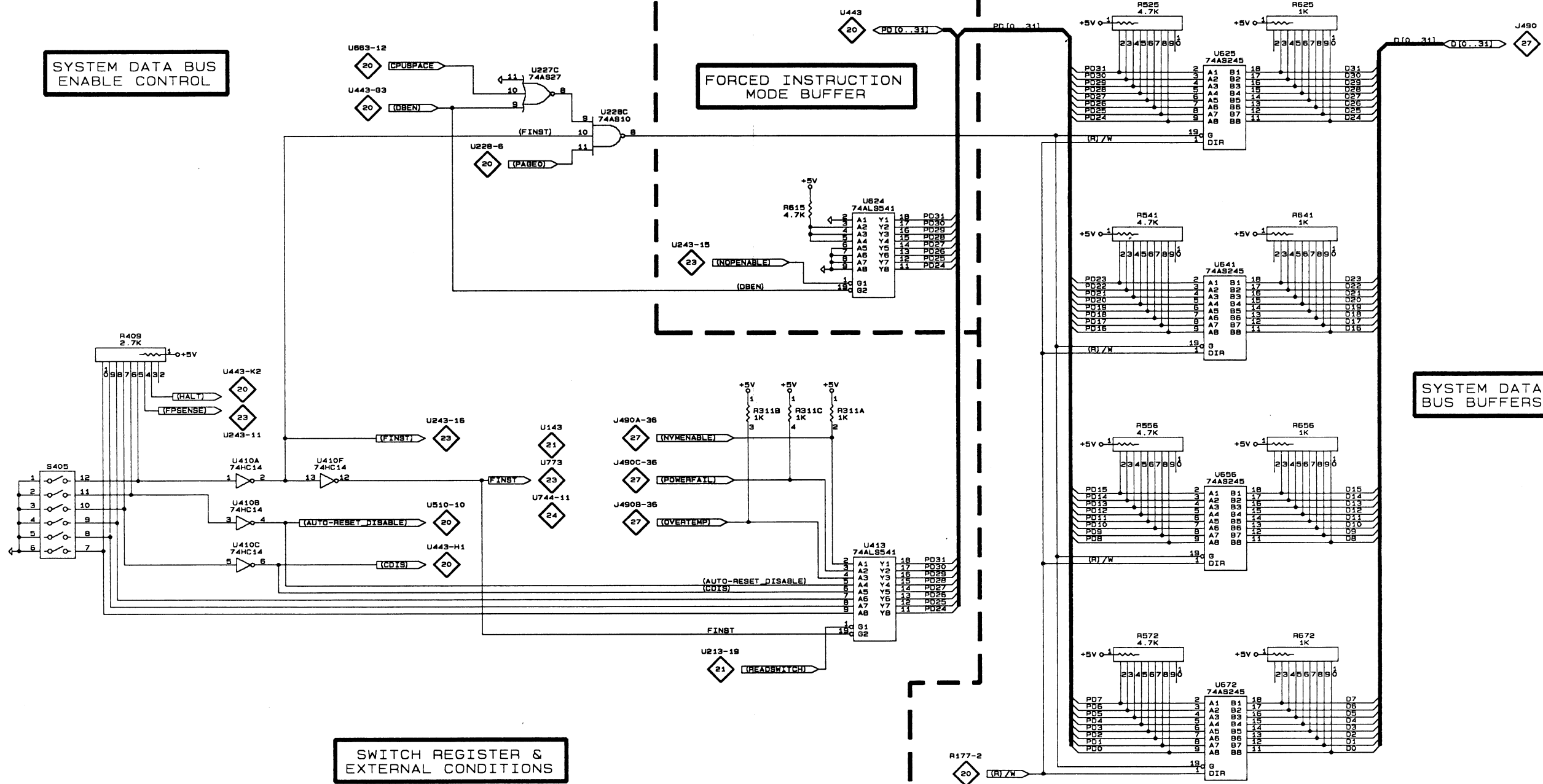
A B C D E F G H

SYSTEM DATA BUS
ENABLE CONTROL

FORCED INSTRUCTION
MODE BUFFER

SYSTEM DATA
BUS BUFFERS

SWITCH REGISTER &
EXTERNAL CONDITIONS



+5V
-5V
GND

CPU BOARD
 Schematic <23> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 24, 25, 26, and 27.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R128	H1	A2
R311F	D2	E2
R311G	D2	E2
R311H	C5	E2
R326	G5	C3
R327	G5	D3
R340	D5	C4
R341	G5	C4
R342	G4	D4
R355	D5	C5
R357	G4	C5
R358	G4	D5
R373	G4	C6
R374	G3	D6
R580	F3	E7
R673	E2	G6
R682	D1	G7
U121	G2	A2
U128A	H1	A3
U128B	E3	A3
U128C	D3	A3
U134A	F2	A3
U146E	G2	A4
U146F	H1	A4
U241	D5	C4
U243	D3	B4
U255B	D4	C5
U255C	D5	C5
U325	F5	C3
U341	F4	C4
U356	F4	C5
U372	F3	C6
U663B	D2	G6
U663C	D2	G6
U674	D1	G7
U773	E3	G6

A B C D E F G H

INTERRUPT
GENERATION

DSACK & BERR
GENERATION

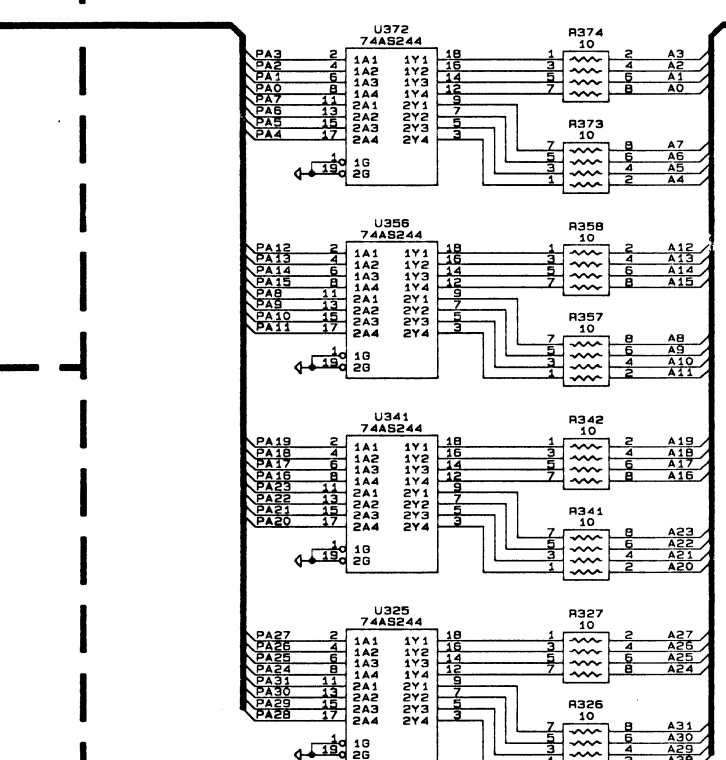
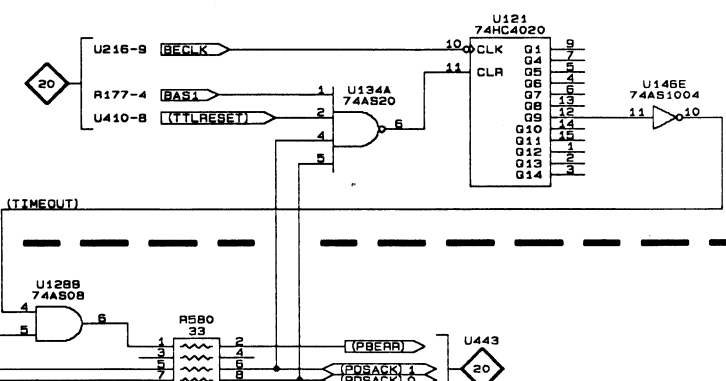
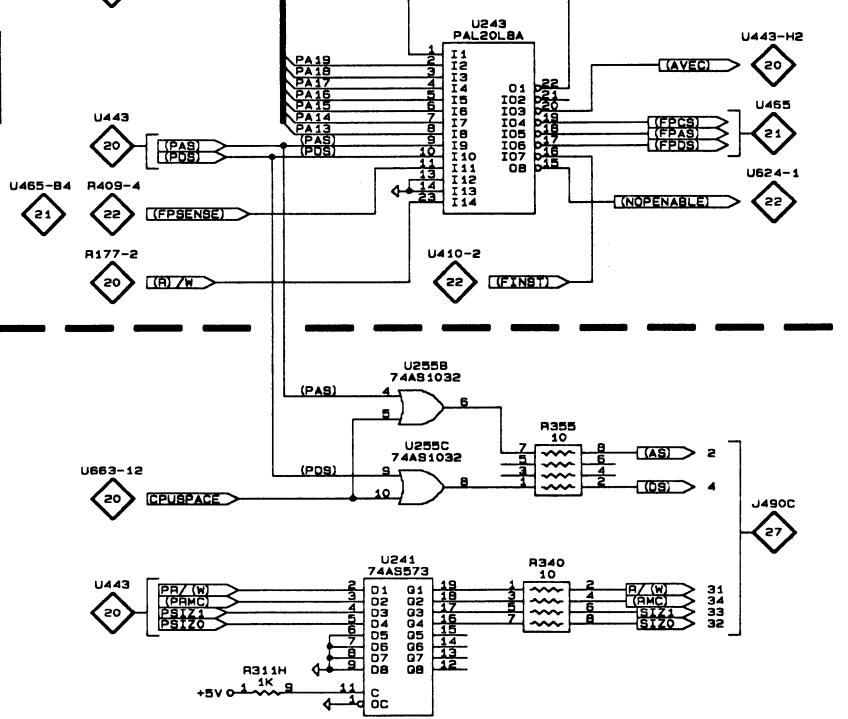
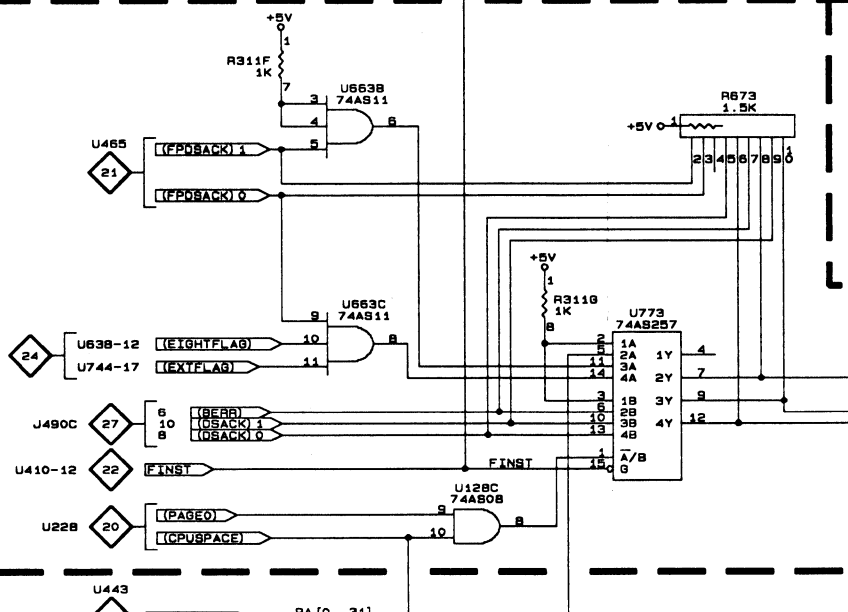
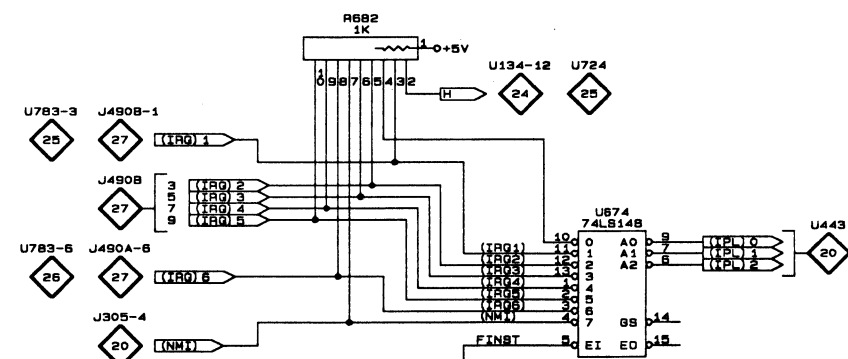
FLOATING-POINT PROCESSOR CONTROL,
AUTO-VECTOR, & FORCED INSTRUCTION
MODE SIGNAL GENERATION

SYSTEM CONTROL
BUS BUFFERS

WATCHDOG
TIMER

SYSTEM ADDRESS
BUS BUFFERS

+5V
0VCC
GND



CPU BOARD
Schematic <24> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

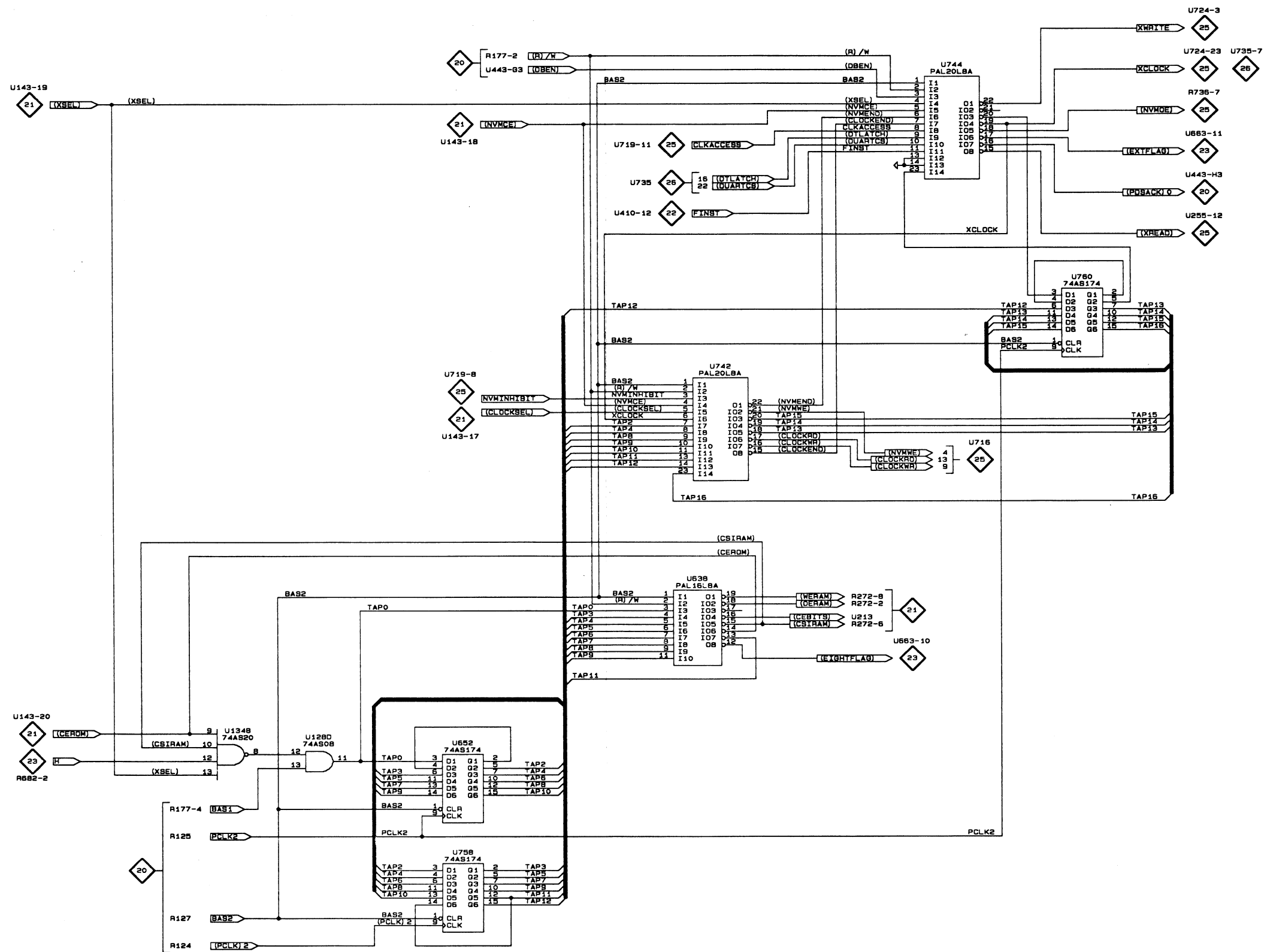
ASSEMBLY A5 *Partial A5 also shown on Schematics 20, 21, 22, 23, 25, 26, and 27.*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
U128D	C4	A3
U134B	C4	A3
U638	E3	G4
U652	D4	G5
U742	E2	G4
U744	F1	H4
U758	D5	G5
U760	G2	H5

A B C D E F G H

1
2
3
4
5

+5V -> +5V
0VCC -> 0VCC
GND -> GND



CPU BOARD
Schematic <25> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 23, 24, 26, and 27.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
BT706	F3	G1
C803	E4	H1
C804	E4	H1
C805	E4	I1
C806	F4	H1
C807	F4	I1
C815	E4	I1
C816	F4	H1
C824	C2	H2
C910	E4	J1
C911	E3	H1
CR508	B2	F1
CR509	B2	F1
CR614	G3	F2
J906	H3	K1
R508	B2	E2
R612	G4	F2
R613	G3	F2
R614	G3	F2
R724	C2	H3
R725	E2	H3
R726	F5	H3
R736A	E1	H3
R736B	E1	H3
R736C	E2	H3
R736D	E2	H3
R773	D1	H6
R811	F4	I1
R823	G2	I2
R836A	E2	H3
R836B	E2	H3
R836C	E1	H3
R836D	E1	H3
R871	G3	I4
R905	E4	H1
R910	E4	J1
R911	D3	H1
U255D	D5	C5
U716B	D2	H2
U716C	C3	H2
U716D	C3	H2
U719A	B2	H2
U719B	C2	H2
U719C	C2	H2
U719D	D3	H2
U724	E5	G2
U772	C1	H6
U783A	G3	H7
U818	E3	I2
U836	F1	I3
U965F	G3	I6
U965E	G3	I6
VR614	G4	F2
Y810	E4	J1
Y811	E4	J1

A B C D E F G H

LOW-ORDER ADDRESS
LINE BUFFER

NONVOLATILE MEMORY/CLOCK
WRITE CONTROL

NONVOLATILE RAM

REAL-TIME CLOCK

REAL-TIME CLOCK

PERIPHERAL DATA BUS
BUFFER/LATCH

+15V -> +15V
+5V -> +5V
GND -> GND

671-1051-03 & UP

P/O A5 - CPU BOARD

VM700

NVRAM, REAL-TIME CLOCK, & DATA BUFFER/LATCH

SN 8021015 & ABOVE

25

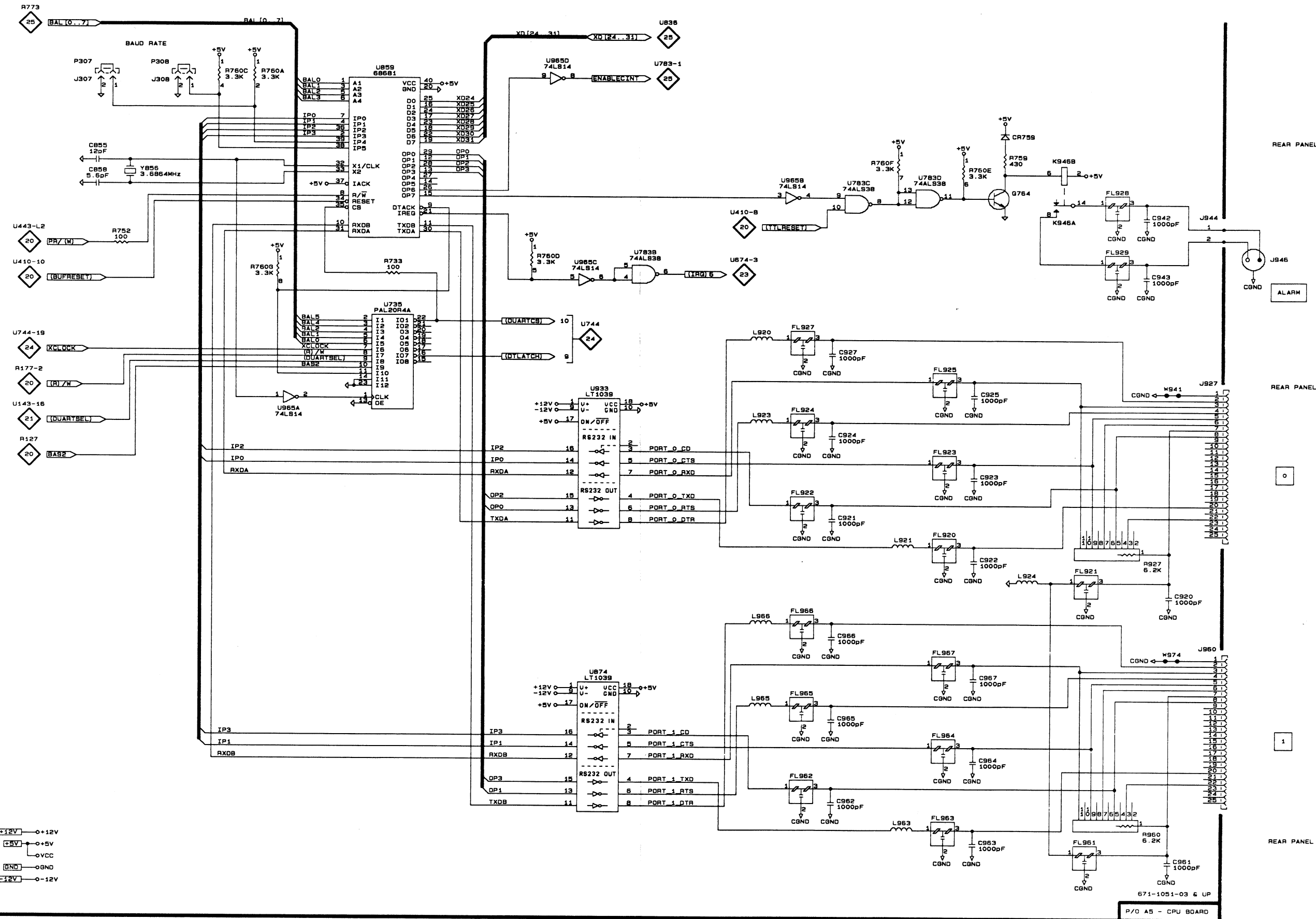
CPU BOARD
Schematic <26> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 23, 24, 25, and 27.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C855	A1	I5	K946A	G2	J4
C858	A2	I5	K946B	G1	J4
C920	G4	J2			
C921	F3	J2	L920	E2	J4
C922	F4	J3	L921	F3	J2
C923	F3	J3	L923	E3	J4
C924	F3	J3	L924	G4	J2
C925	F3	J3	L963	F5	J6
C927	F2	J4	L965	E4	J6
C942	G2	J4	L966	E4	J7
C943	G2	J4			
C961	G5	J5	Q764	F2	H6
C962	F5	J5			
C963	F5	J5	R733	C2	H3
C964	F5	J6	R752	B2	H5
C965	F4	J6	R759	G1	H5
C966	F4	J7	R760A	B1	H4
C967	F4	J6	R760C	B1	H4
			R760D	D2	H4
CR759	G1	H5	R760E	F1	H4
			R760F	F1	H4
FL920	F3	J2	R760G	B2	H4
FL921	G4	J2	R927	G3	J3
FL922	E3	J2	R960	G5	J5
FL923	F3	J3			
FL924	E3	J3	U735	C2	H3
FL925	F3	J4	U783B	D2	H7
FL927	E2	J4	U783C	F2	H7
FL928	G2	J4	U783D	F2	H7
FL929	G2	J4	U859	C1	I5
FL961	G5	J5	U874	D4	I6
FL962	E5	J5	U933	D3	I3
FL963	F5	J5	U965A	B3	I6
FL964	F4	J6	U965B	E2	I6
FL965	E4	J6	U965C	D2	I6
FL966	E4	J7	U965D	D1	I6
FL967	F4	J7			
			W941	G3	J4
J307	A1	C1	W974	G4	J7
J308	B1	C1			
J927	H3	J3	Y856	B1	I5
J944	H2	J4			
J960	H4	J5			

A B C D E F G H



VM700

RS-232C INTERFACE & ALARM RELAY
SN 8021015 & ABOVE

26

CPU BOARD
Schematic <27> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 23, 24, 25, and 26.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C109	E4	B2	C715	G5	G2
C115	E4	D2	C733	G5	G3
C122	E4	A3	C735	G5	H3
C128	F4	C2	C743	G5	H4
C134	F4	A3	C751	E5	G5
C140	F4	A4	C753	E5	H5
C152	G4	A5	C766	E5	G6
C214	G4	A1	C767	F5	H6
C221	G4	B2	C826	F5	H2
C222	G4	B3	C846	F5	I4
C233	E4	B3	C874	G5	I6
C234	E4	B3	C879	B4	I7
C249	E4	B5	C883	C4	J7
C252	F4	B5	C886	A4	I7
C260	F4	B6	C887	B4	I8
C277	D4	A8	C926	G5	I2
C310	F4	E1	C960	G5	H7
C317	G4	D2	C979	B5	I7
C333	G4	C3	C983	C5	J8
C349	G4	D3	C986	A5	I7
C364	G4	C6	C987	B5	I8
C404	E4	D2			
C429	D4	D3	CR881	B4	I8
C433	C4	D4	CR981	B5	I8
C443	E4	E3			
C456	D4	E4	F283	H3	B7
C458	D4	E5			
C465	E4	D6	J490A	D2	E8
C472	D4	E7	J490B	F2	E8
C476	D4	E7	J490C	H2	E8
C543	F4	D5			
C565	F4	E6	R281	D5	J7
C614	F4	E1	R785	C1	G7
C618	G4	F2			
C631	G4	G3	TP106	C5	B1
C633	G4	F3	TP184	D5	B7
C646	G4	F4	TP457	D5	D5
C648	E5	F5	TP906	D5	K1
C658	E5	F5	TP981	D5	J8
C664	E5	F6			
C668	F5	F6	U882	B4	I7
C711	F5	H1	U982	B5	I7
C713	F5	H1			

A B C D E F G H

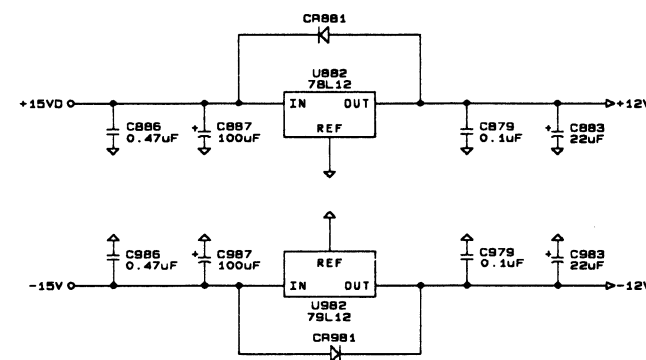
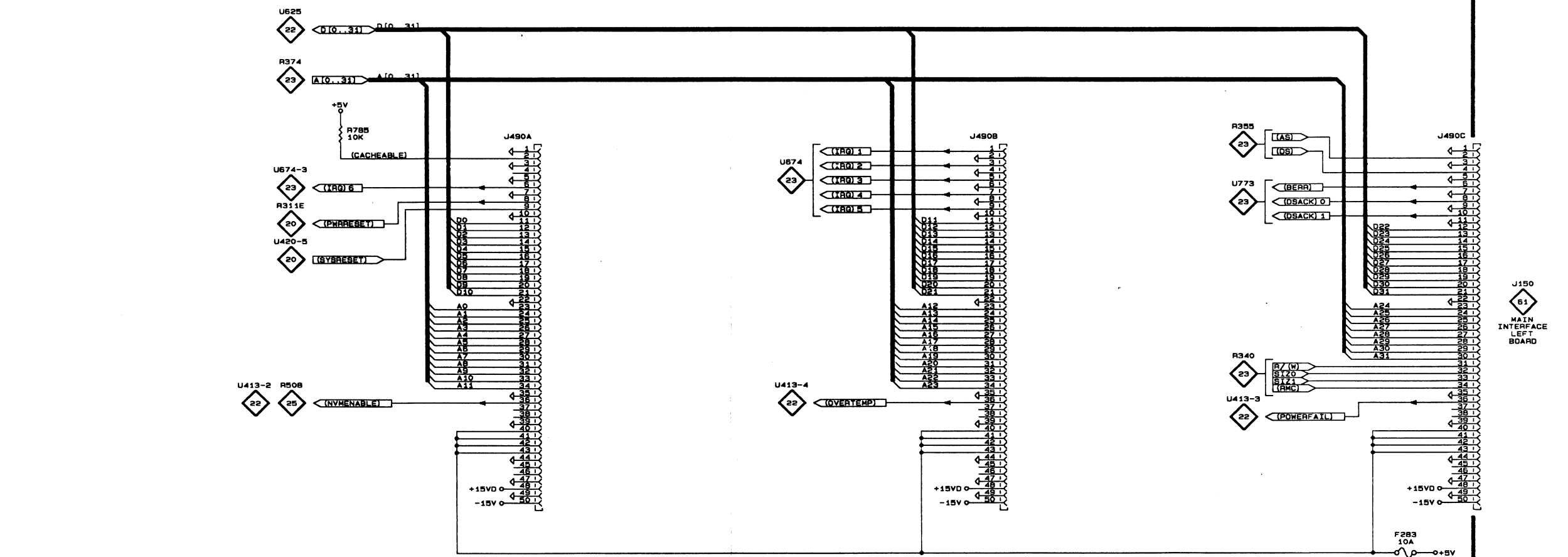
1

2

3

4

5



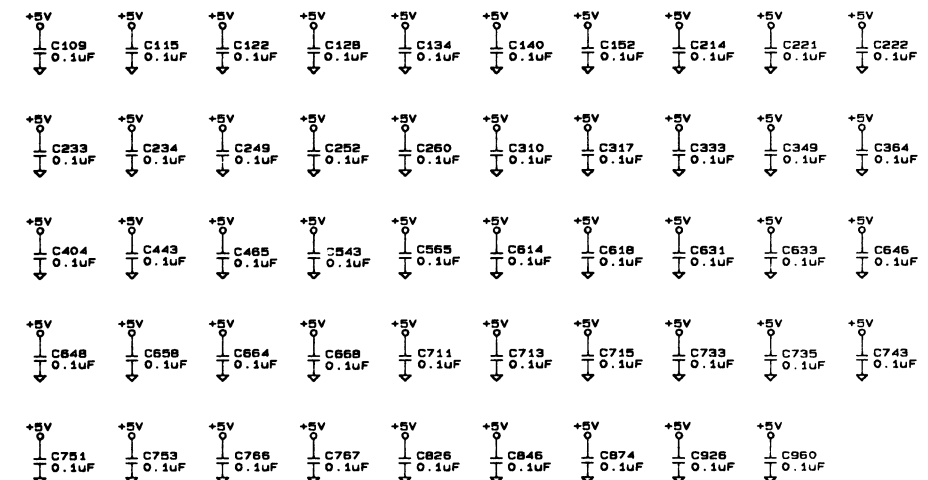
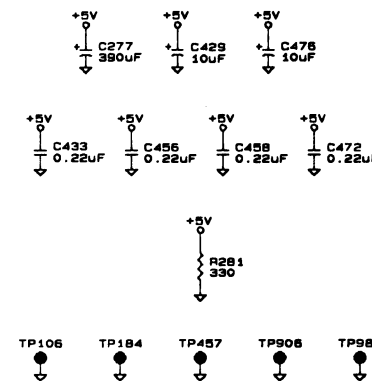
+15V 0 +15V

+12V 0 +12V

+5V 0 +5V

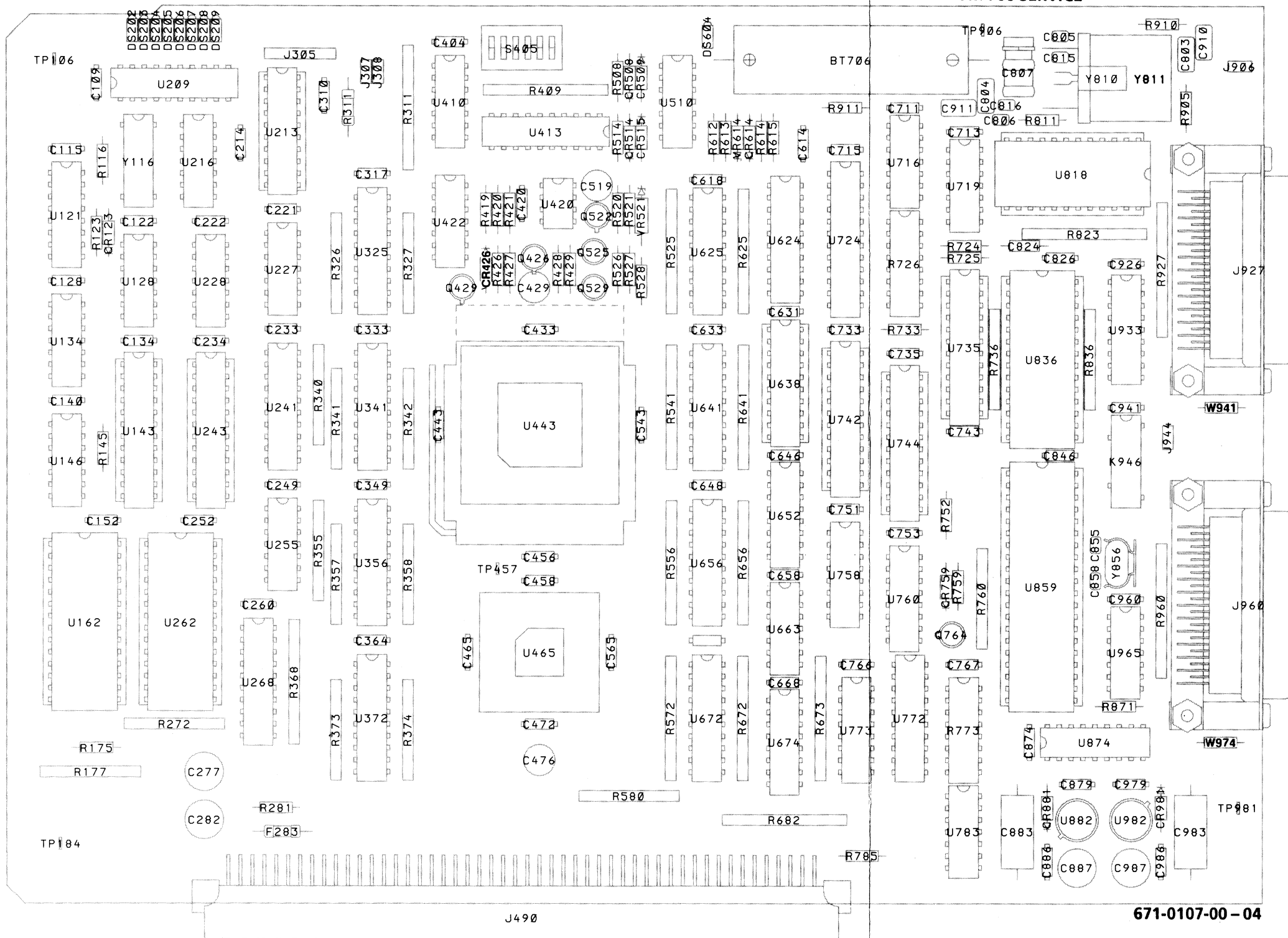
(GND) 0 GND

-12V 0 -12V



671-1051-03 & UP

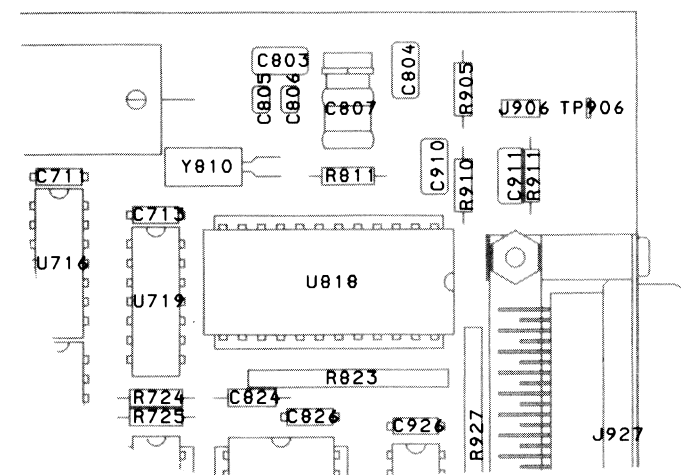
P/O A5 - CPU BOARD



A5 CPU Board

Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

VM 700 SERVICE



671-0107-03

CPU BOARD

Schematic <20> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on
Schematics 21, 22, 23, 24, 25, 26, and 27.

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C420	B4	B1	R429	E4	B2
C519	B4	C2	R514	E4	F2
CR123	B2	D2	R520	D5	B1
CR426	D5	A1	R521	D4	B1
CR514	E4	F2	R526	C4	B2
CR515	E4	F2	R527	E5	B2
			R528	E5	B2
DS604	D3	D1	U146A	F2	A4
F311	H4	C1	U146B	F2	A4
J305	H4	B1	U146C	E2	A4
Q426	C5	B2	U146D	F2	A4
Q429	D5	B1	U216A	A1	D2
Q522	E4	B2	U216B	B1	D2
Q525	E4	A2	U227A	F1	C3
Q529	E5	A2	U227B	F1	C3
R116	A1	D3	U228A	D1	B3
R123	B2	D3	U228B	F1	B3
R124	B2	E3	U410D	G5	E1
R125	B2	E3	U410E	G5	E1
R127	F2	B3	U420	B4	C1
R129	B2	D3	U422A	F5	D1
R177A	F2	A4	U422B	G5	D1
R177B	F2	A4	U422C	D4	D1
R177C	F2	A4	U422D	C5	D1
R177D	F1	A4	U422E	E5	D1
R311E	E4	E2	U422F	E5	D1
R419	D4	B1	U443	C1	E4
R420	C5	B2	U510A	F3	C1
R421	C5	B1	U510B	E3	C1
R426	C5	A1	U510C	E3	C1
R427	C5	A2	U510D	E3	C1
R428	C5	B1	U663A	D1	G6
			U716A	F5	H2
			VR521	E5	C1
			Y116	A1	D1



VM 700 SERVICE

CPU BOARD Schematic <21> Look-Up Chart

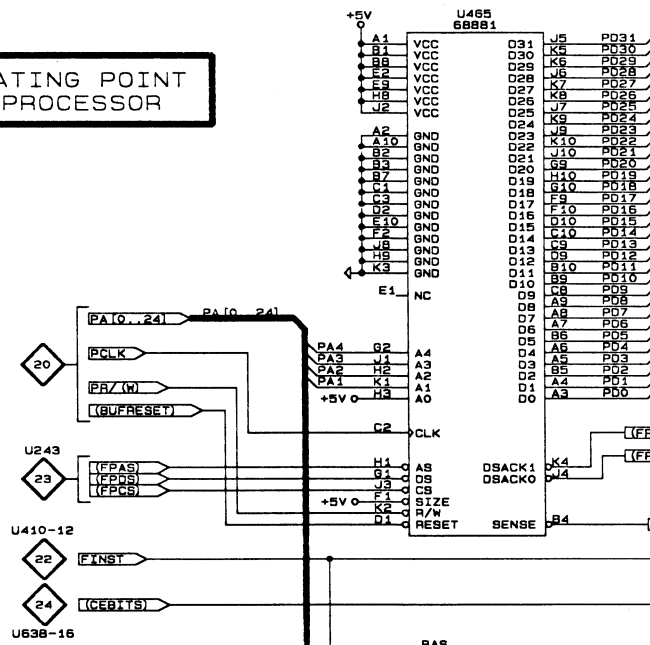
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 22, 23, 24, 25, 26, and 27.

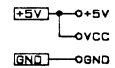
CIRCUIT NUMBER	SCHEMATIC LOCATION
DS202	E1
DS203	F1
DS204	F1
DS205	F1
DS206	G1
DS207	G1
DS208	G1
DS209	G1
R145	D4
R175	D4
R272	D4
R368	F2
U143	C4
U162	E4
U209	E1
U213	E2
U255A	D3
U262	E3
U268	E3
U465	C1

A B C D E F G H

FLOATING POINT
COPROCESSOR



GENERAL
ENABLE
DECODING



U410-B
(TTL RESET)

R177-B
BDS

U653
(FPDSACK) 1

U243-11
(FPSENSE)

U443-G3
(OPEN)

U255A
74AS1032

R272
100

U1348
(CEROM)

R177-B
(BDS)

U1348
(XSEL)

U744
(NMCE)

U742-5
(CLOCKSEL)

U735-9
(QUARTSEL)

U443
20

U209
74ALS273

U213
PAL16R4A

U216-B
(PCLK)

U268
74ALS245

U262
5264

U162
27512

U143
PAL20L8A

U228-6
(PAGE0)

U1348
(XSEL)

U744
(NMCE)

U742-5
(CLOCKSEL)

U735-9
(QUARTSEL)

U1348
(XSEL)

U744
(NMCE)

U742-5
(CLOCKSEL)

U735-9
(QUARTSEL)

U1348
(XSEL)

U744
(NMCE)

U742-5
(CLOCKSEL)

U735-9
(QUARTSEL)

DIAGNOSTIC DISPLAY

DIAGNOSTIC DISPLAY
& SWITCH REGISTER
ENABLE DECODING

LOCAL ROM & RAM

NOTE: SEE PARTS LIST FOR EARLIER VALUES
AND SERIAL NUMBER RANGES

671-0107-00 - 04

P/O A5 - CPU BOARD

CPU BOARD
Schematic <22> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 23, 24, 25, 26, and 27.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R311A	E3
R311B	D3
R311C	E3
R409	A3
R525	F1
R541	F2
R556	F3
R572	F4
R615	E2
R625	G1
R641	G2
R656	G3
R672	G4
S405	A3
U227C	D1
U228C	D2
U410A	B3
U410B	B3
U410C	B4
U410F	B3
U413	E4
U624	E2
U625	G1
U641	G2
U656	G3
U672	G4

A B C D E F G H

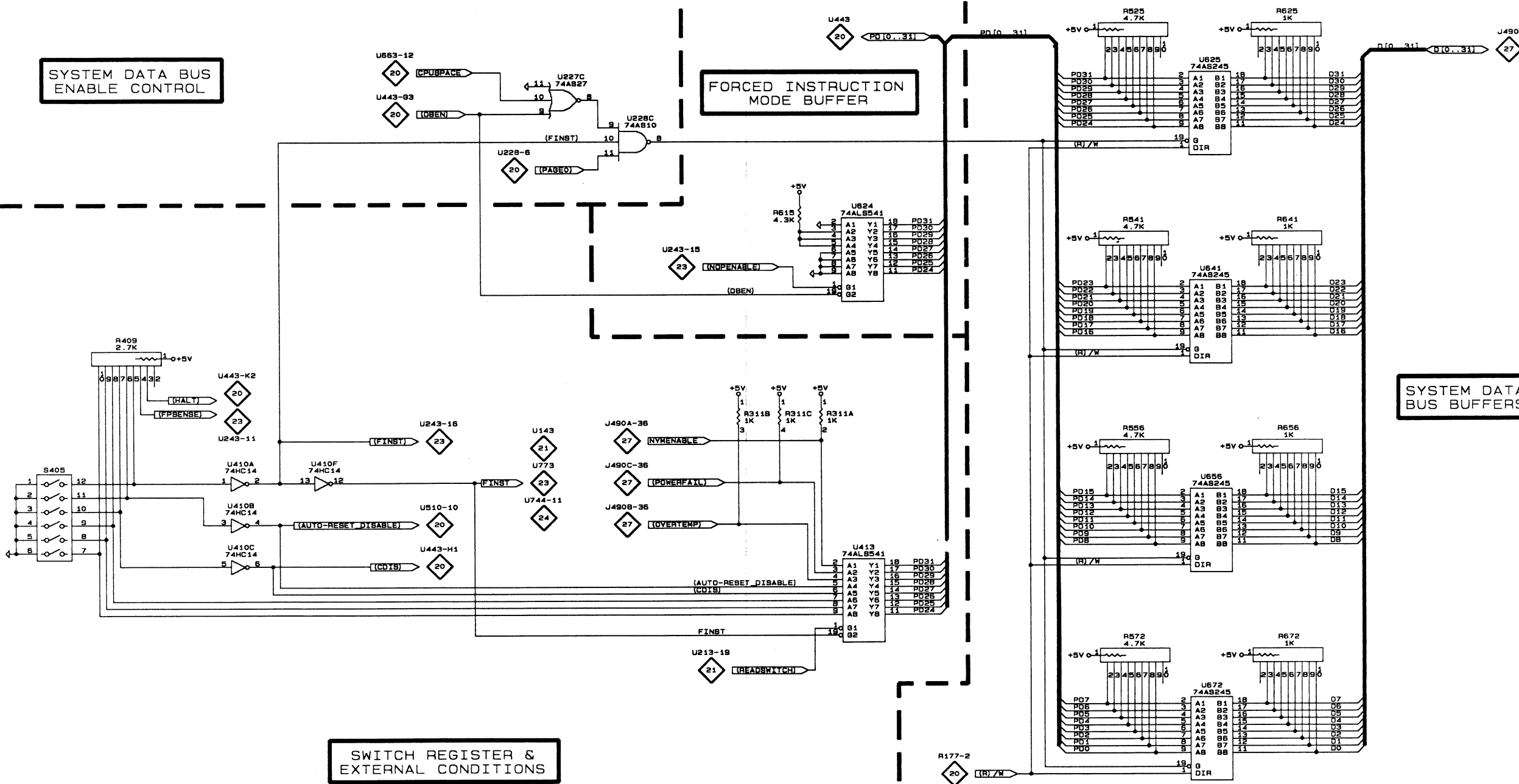
SYSTEM DATA BUS
ENABLE CONTROL

FORCED INSTRUCTION
MODE BUFFER

SYSTEM DATA
BUS BUFFERS

SWITCH REGISTER &
EXTERNAL CONDITIONS

+5V - +5V
- -0VCC
GND - GND



671-0107-00 - 04

P/O A5 - CPU BOARD

CPU BOARD
Schematic <23> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 24, 25, 26, and 27.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R311F	D2
R311G	D2
R311H	C5
R326	G5
R327	G5
R340	D5
R341	G5
R342	G4
R355	D4
R357	G4
R358	G4
R373	G4
R374	G3
R580	F3
R673	E2
R682	D1
U121	G2
U128B	E3
U128C	D3
U134A	F2
U146E	G2
U241	D5
U243	D3
U255B	D4
U255C	D5
U325	F5
U341	F4
U356	F4
U372	F3
U663B	D2
U663C	D2
U674	D1
U773	E3

A B C D E F G H

INTERRUPT GENERATION

DSACK & BERR GENERATION

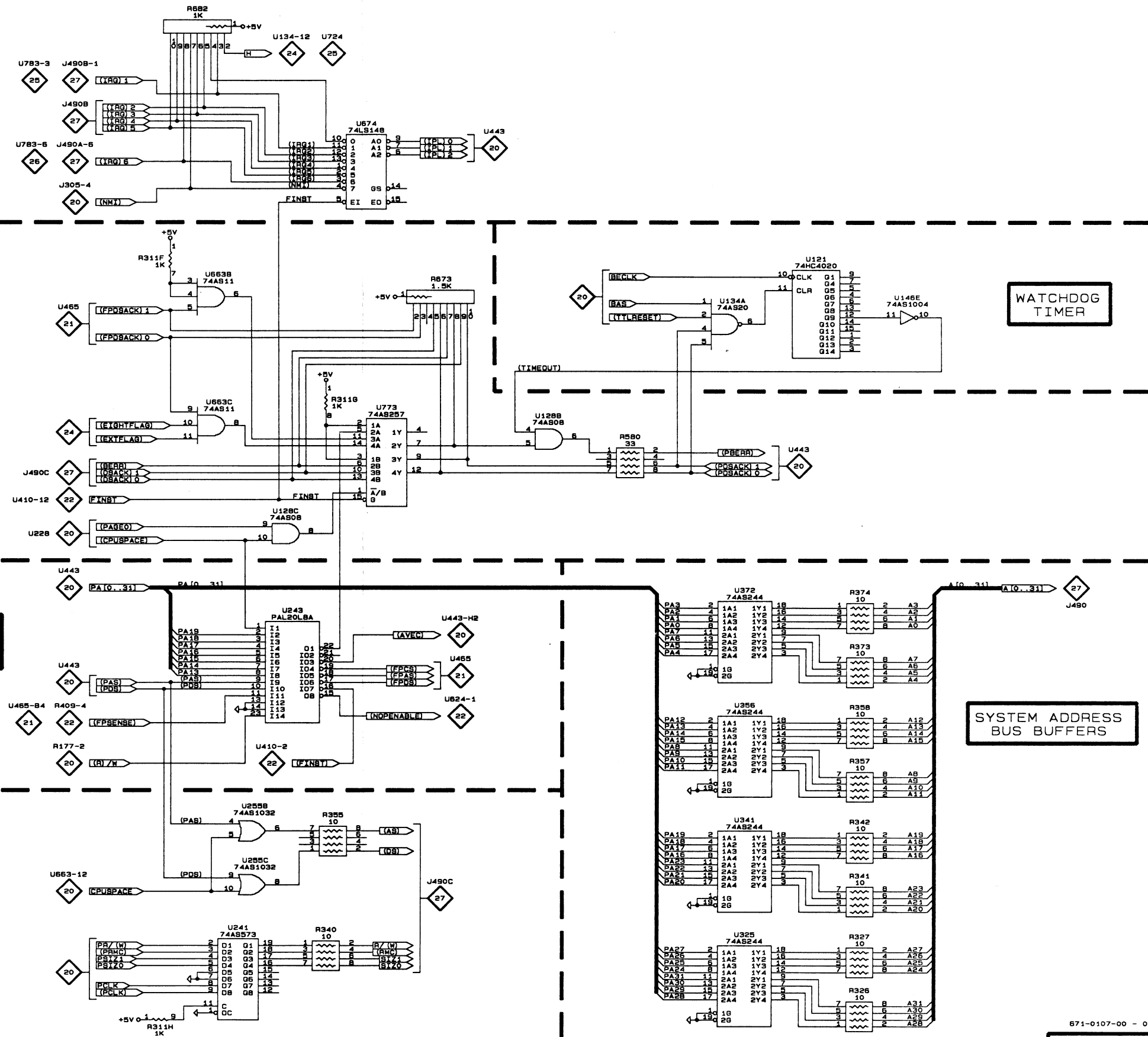
FLOATING-POINT PROCESSOR CONTROL, AUTO-VECTOR, & FORCED INSTRUCTION MODE SIGNAL GENERATION

SYSTEM CONTROL BUS BUFFERS

WATCHDOG TIMER

SYSTEM ADDRESS BUS BUFFERS

+5V
-VCC
-GND



VM 700 SERVICE

CPU BOARD

Schematic <24> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

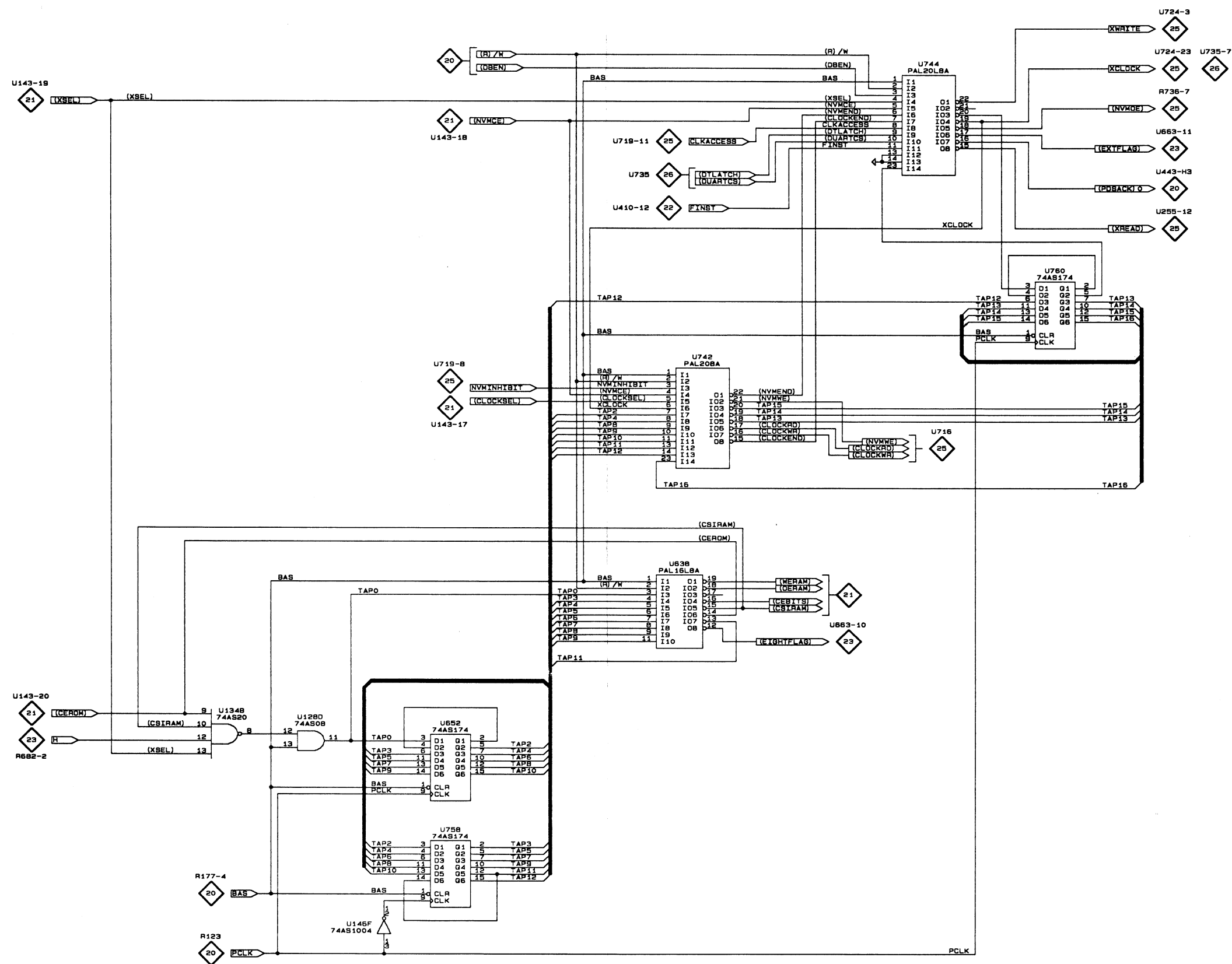
ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 23, 25, 26, and 27.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U128D	C4
U134B	C4
U146F	C5
U638	E3
U652	D4
U742	E2
U744	F1
U758	D5
U760	G2

A B C D E F G H

1
2
3
4
5

5V - +5V
OVCC - +VCC
GND - 0GND



671-0107-00 - 04

P/O A5 - CPU BOARD

VM700

PERIPHERAL ACCESS CONTROL & TIMING GENERATION

SN 8021014 & BELOW

24

CPU BOARD
Schematic <25> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 23, 24, 26, and 27.

CIRCUIT NUMBER	SCHEMATIC LOCATION
BT706	F3
C803	E4
C804	E4
C805	E4
C806	F4
C807	F4
C815	E4
C816	F4
C824	C2
C910	E4
C911	E3
CR508	B2
CR509	B2
CR614	G3
J906	H3
R508	B2
R612	G4
R613	G3
R614	G3
R724	C2
R725	E2
R726	F5
R736A	E1
R736B	E1
R736C	E2
R736D	E2
R773	D1
R811	F4
R823	G2
R836A	E2
R836B	E2
R836C	E1
R836D	E1
R871	G3
R905	E4
R910	E4
R911	D3
U255D	D5
U716B	D2
U716C	D3
U716D	D3
U719A	B2
U719B	C2
U719C	C2
U719D	D3
U724	E5
U772	C1
U783A	G3
U818	E3
U836	F1
U965E	G3
U965F	G3
VR614	G4
Y810	E4

A B C D E F G H

LOW-ORDER ADDRESS
LINE BUFFER

NONVOLATILE MEMORY/CLOCK
WRITE CONTROL

NONVOLATILE RAM

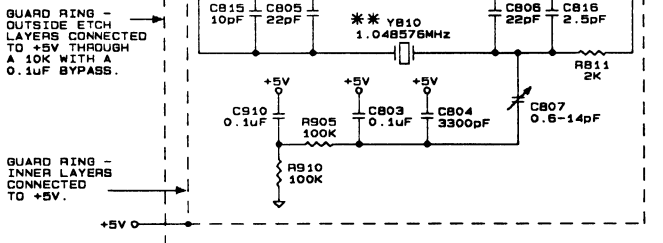
REAL-TIME CLOCK

REAL-TIME CLOCK

PERIPHERAL DATA BUS
BUFFER/LATCH

PART VALUES PER CRYSTAL

	Y810	Y811
CB05	12pF	22pF
CB06	5.6pF	22pF
CB15	NONE	10pF
CB16	NONE	2.5pF



NOTE: SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES

+15V -> +15V
+5V -> +5V
OVCC -> OVCC
GND -> GND

671-0107-00 - 04

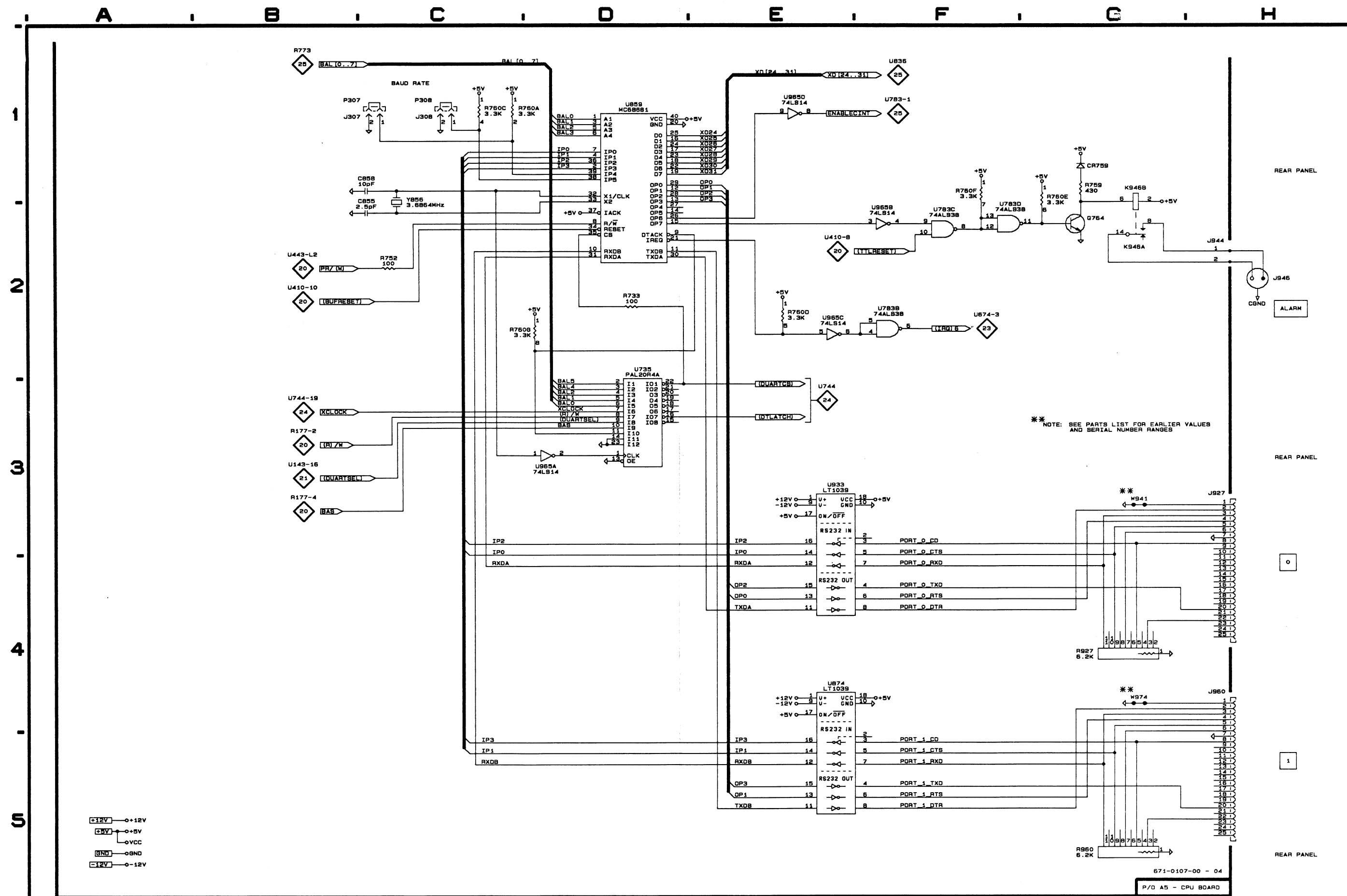
P/O A5 - CPU BOARD

CPU BOARD
Schematic <26> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 *Partial A5 also shown on Schematics 20, 21, 22, 23, 24, 25, and 27.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
C855	C2
C858	C1
CR759	G1
J307	C1
J308	C1
J927	H3
J944	H2
J960	H4
K946A	G2
K946B	G1
Q764	G2
R733	D2
R752	C2
R759	G1
R760A	C1
R760C	C1
R760D	E2
R760E	G1
R760F	F1
R760G	D2
R927	G4
R960	G5
U735	D3
U783B	F2
U783C	F2
U783D	F2
U859	D1
U874	E4
U933	E3
U965A	D3
U965B	F2
U965C	E2
U965D	E1
Y856	C1



CPU BOARD
Schematic <27> Look-Up Chart

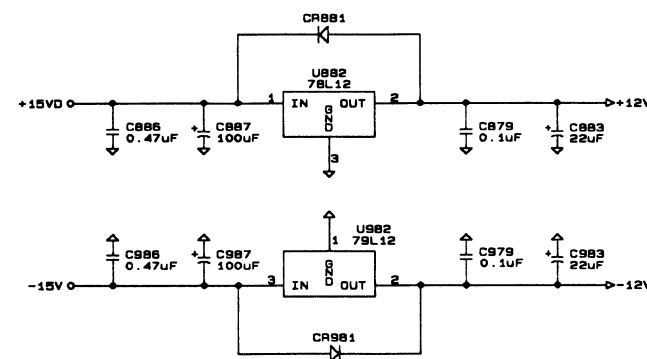
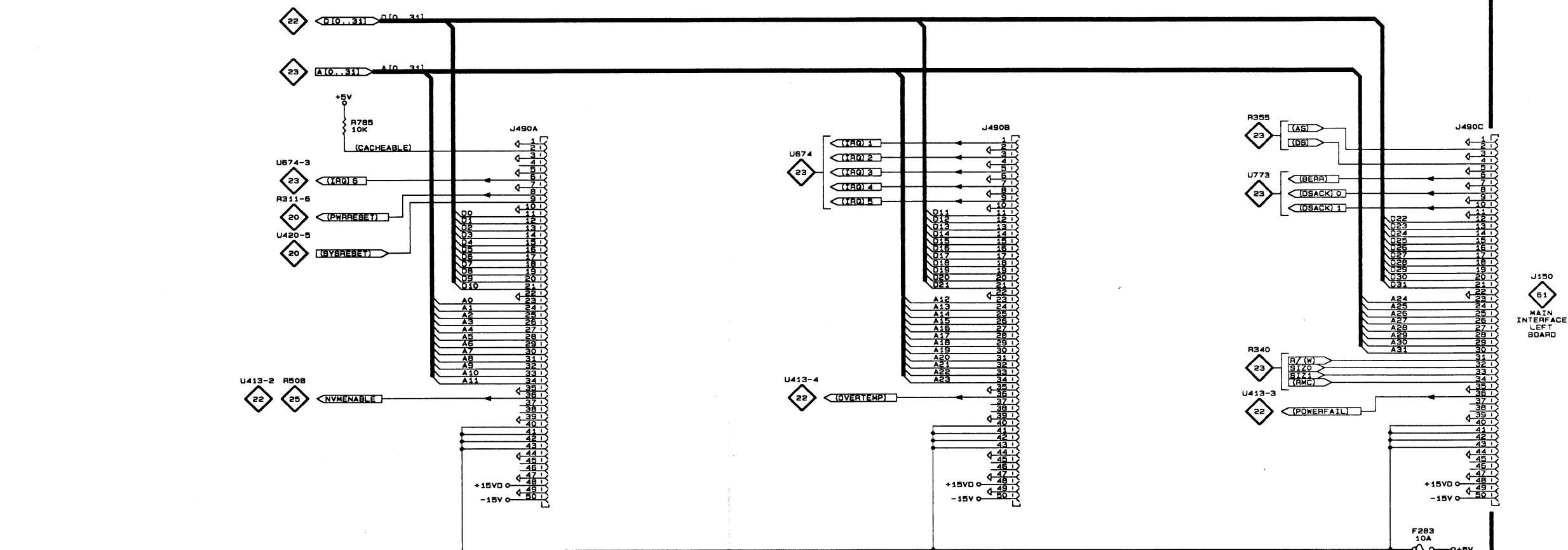
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A5 Partial A5 also shown on Schematics 20, 21, 22, 23, 24, 25, and 26.

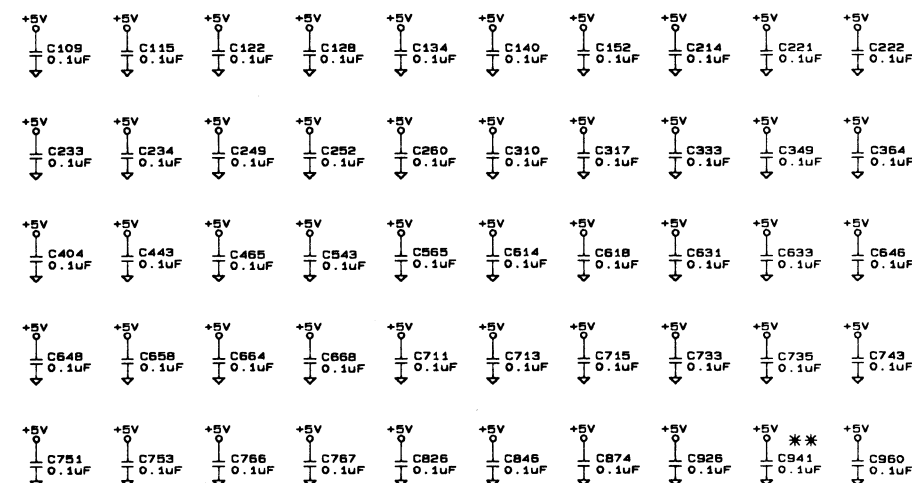
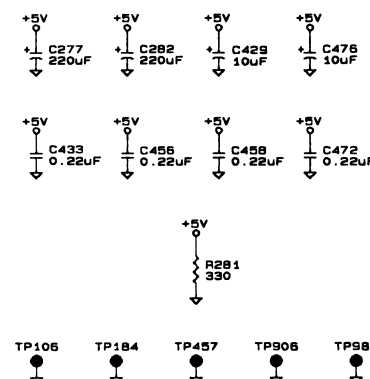
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C109	E4	C767	F5
C115	F4	C826	F5
C122	F4	C846	G5
C128	F4	C874	G5
C134	F4	C879	C4
C140	G4	C883	C4
C152	G4	C886	B4
C214	G4	C887	B4
C221	G4	C926	G5
C222	H4	C941	G5
C233	E4	C960	H5
C234	F4	C979	C5
C249	F4	C983	C5
C252	F4	C986	B5
C260	F4	C987	B5
C277	D4		
C282	D4	CR881	B4
C310	G4	CR981	B5
C317	G4		
C333	G4	F283	G3
C349	G4		
C364	H4	J490A	C2
C404	E5	J490B	E2
C429	D4	J490C	G2
C433	D4		
C443	F5	R281	D5
C456	D4	R785	B1
C458	D4		
C465	F5	TP106	D5
C472	E4	TP184	D5
C476	E4	TP457	D5
C543	F5	TP906	D5
C565	F5	TP981	E5
C614	G5		
C618	G5	U882	B4
C631	G5	U982	B5
C633	G5		
C646	H5		
C648	E5		
C658	F5		
C664	F5		
C668	F5		
C711	F5		
C713	G5		
C715	G5		
C733	G5		
C735	G5		
C743	H5		
C751	E5		
C753	F5		
C766	F5		

A B C D E F G H

1
2
3
4
5



+15V0 -> +15V0
+12V -> +12V
+5V -> +5V
GND -> GND
-12V -> -12V



NOTE: SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES

671-0107-00 - 04

P/O A5 - CPU BOARD

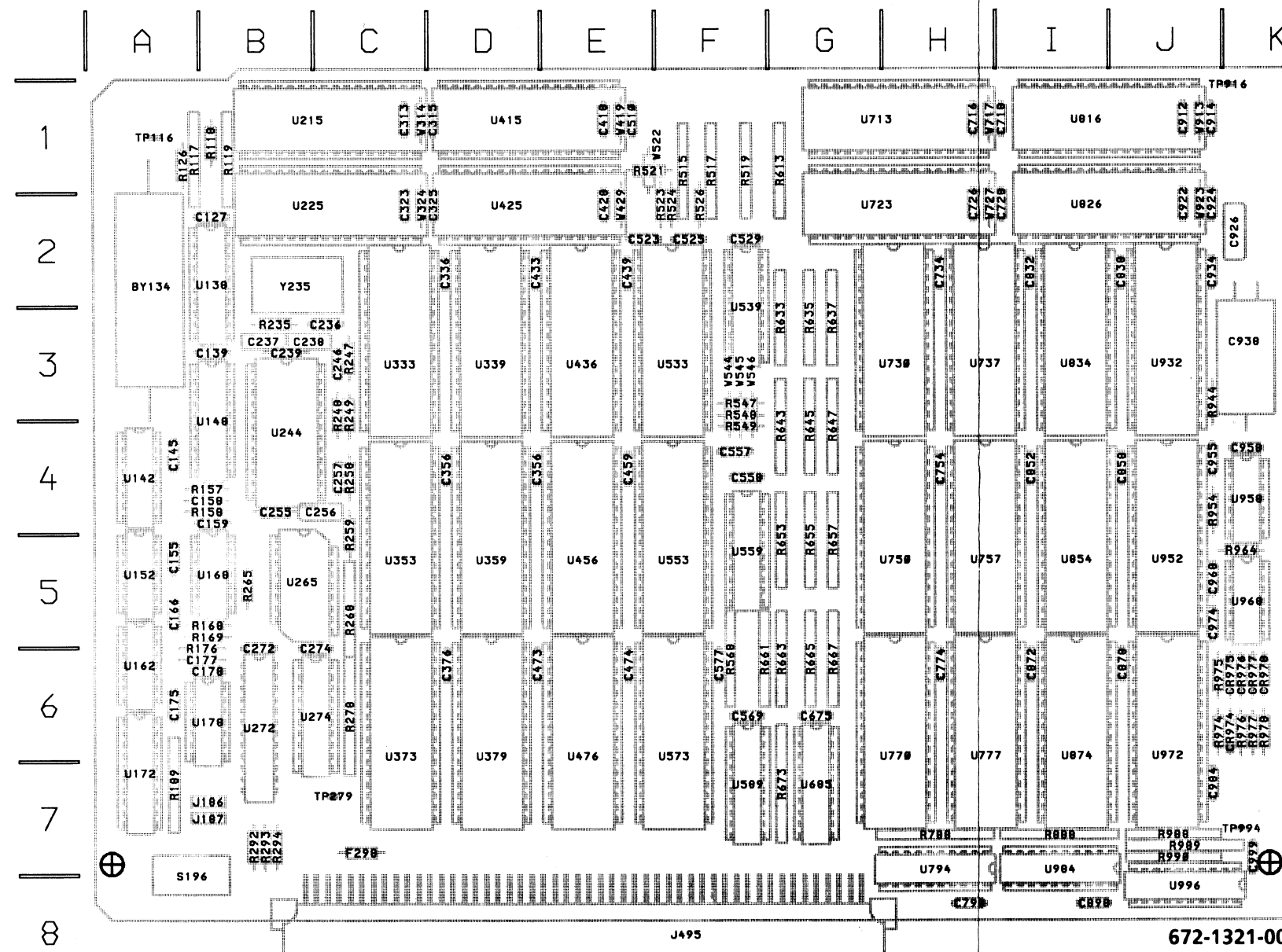
VM 700 SERVICE

EPROM BOARD Schematic <28> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 29, 30, and 31.

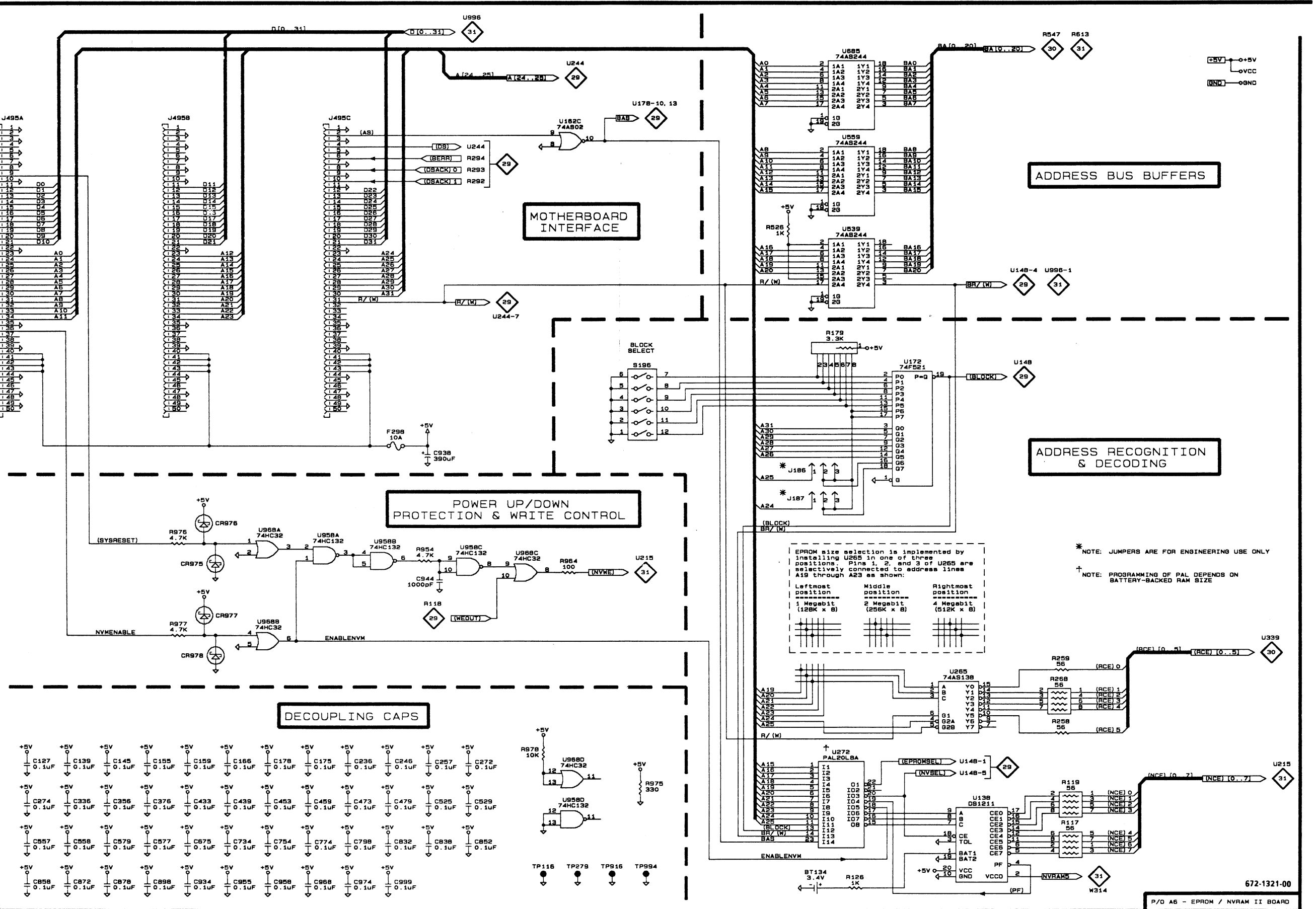
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
BT134	F5	CR975	B4
C127	A5	CR976	B3
C139	A5	CR977	B4
C145	A5	CR978	B4
C155	B5	F298	C3
C159	B5		
C166	B5	J186	F3
C175	C5	J187	F3
C178	B5	J495A	A1
C236	C5	J495B	B1
C246	C5	J495C	C1
C257	C5		
C272	D5	R117	G5
C274	A5	R119	G5
C336	A5	R126	F5
C356	A5	R179	F2
C376	B5	R258	G4
C433	B5	R259	G4
C439	B5	R268	G4
C453	B5	R526	E2
C459	C5	R954	C4
C473	C5	R964	D4
C479	C5	R975	E5
C525	C5	R976	B3
C529	D5	R977	B4
C557	A5	R978	D5
C558	A5		
C577	B5	S196	E2
C579	A5		
C675	B5	TP116	D5
C734	B5	TP279	D5
C754	B5	TP916	D5
C774	C5	TP994	E5
C798	C5		
C832	C5	U138	F5
C838	C5	U162C	D1
C852	D5	U172	F3
C858	A5	U265	F4
C872	A5	U272	F5
C878	A5	U539	F2
C898	B5	U559	F1
C934	B5	U685	F1
C938	C3	U958A	C3
C944	C4	U958B	C3
C955	B5	U958C	D4
C958	B5	U958D	D5
C968	C5	U968A	B3
C974	C5	U968B	B4
C999	C5	U968C	D4
		U968D	D5



A6 EPROM Board

 Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

A B C D E F G H

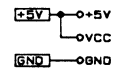


EPROM BOARD Schematic <29> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 28, 30, and 31.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C158	E4
C177	F4
C237	C3
C238	B3
C239	B3
C255	B3
C256	B3
R118	E2
R157	F2
R158	G3
R168	F4
R169	F4
R176	E4
R178	D3
R235	E2
R265	E4
R292	G3
R293	G3
R294	G3
U142	F3
U148	D2
U152A	D4
U152B	E3
U162A	G3
U162B	F4
U162D	G4
U168A	G4
U168B	G4
U168C	D4
U168D	E4
U178A	G3
U178B	G4
U178C	D3
U178D	E4
U244	C2



EPROM BOARD
Schematic <30> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 28, 29, and 31.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R247	B5
R248	B2
R249	B4
R547	B5
R548	B3
R549	B2
R568A	B2
R568B	B2
R633	B4
R635	B5
R637	B4
R643A	B5
R643B	B5
R643C	B3
R643D	B3
R645	B3
R647	B4
R653	B3
R655	B3
R657	B2
R661	B1
R663	B1
R665	B2
R667	B1
U333	C4
U339	C5
U353	C2
U359	C3
U373	C1
U379	C1
U436	D4
U456	D2
U476	D1
U533	D5
U553	D3
U573	D1
U730	F4
U737	F5
U750	F2
U757	F3
U770	F1
U777	F1
U834	G4
U854	G2
U874	G1
U932	G5
U952	G3
U972	G1
W544	B2
W545	B4
W546	B5

A B C D E F G H

+5V OVCC
GND OGND

U685
28 BA[2..20] BA[12..20]

U14B-15 29 (OE) (OE)
R259 28 (OE) (OE)

VM700

EPROM ARRAY
SN 8021015 & ABOVE

30

672-1321-00

P/O A6 - EPROM / NVRAM II BOARD

31
R278

VM 700 SERVICE

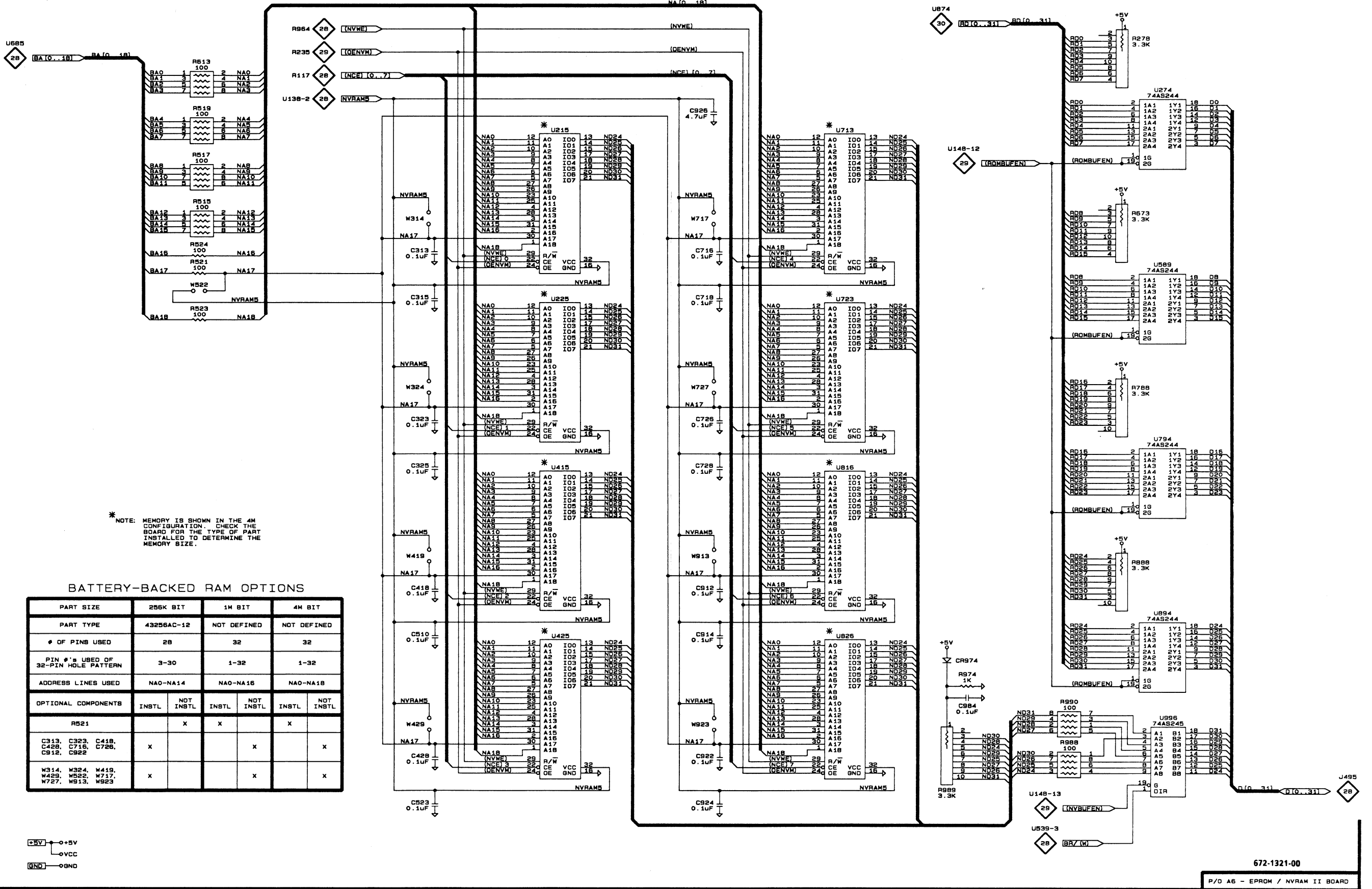
EPROM BOARD Schematic <31> Look-Up Chart

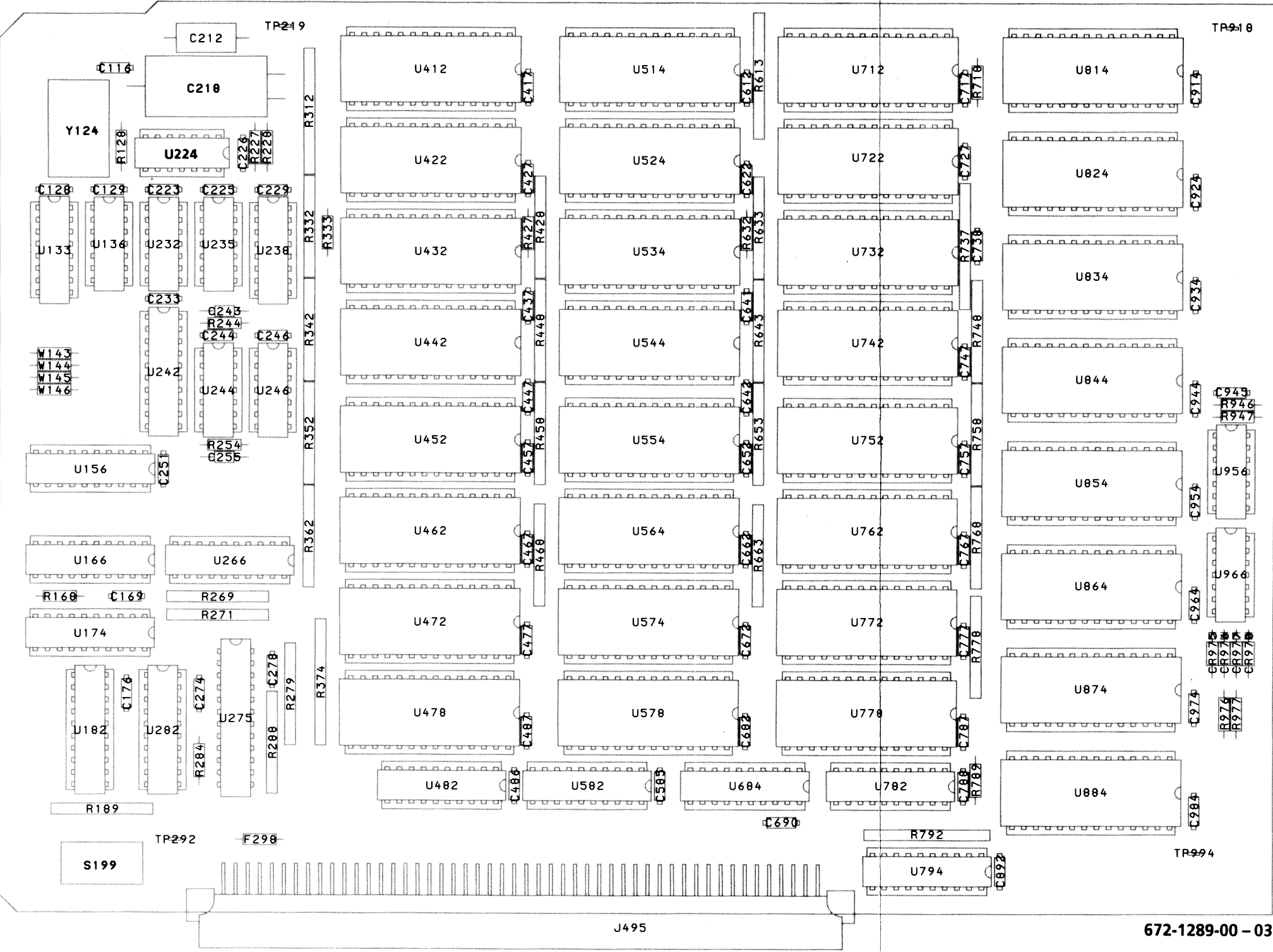
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 28, 29, and 30.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C313	C2
C315	C2
C323	C3
C325	C3
C418	C4
C428	C5
C510	C4
C523	C5
C716	E2
C718	E2
C726	E3
C728	E3
C912	E4
C914	E4
C922	E5
C924	E5
C926	E1
C984	F4
CR974	F4
R278	G1
R515	B2
R517	B2
R519	B1
R521	B2
R523	B2
R524	B2
R613	B1
R673	G2
R788	G3
R888	G4
R974	F4
R988	G5
R989	F5
R990	G4
U215	D1
U225	D2
U274	G1
U415	D3
U425	D4
U589	G2
U713	E1
U723	E2
U794	G3
U816	E3
U826	E4
U894	G4
U996	G5
W314	C2
W324	C3
W419	C4
W429	C5
W522	B2
W717	E2
W727	E3
W913	E4
W923	E5

A B C D E F G H





A6 EPROM Board

672-1289-00 - 03

Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components

EPROM BOARD
Schematic <28> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 29, 30, and 31.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C116	A4	C974	D5
C128	A4	C984	D5
C129	B4		
C169	B4	F298	C3
C176	B4		
C212	D3	J495A	A1
C218	D3	J495B	B1
C223	B4	J495C	C1
C225	C4		
C226	C4	R168	E1
C229	C4	R189	E3
C233	C4	R269A	F4
C244	D4	R269B	F4
C246	D4	R269C	F4
C251	D4	R269D	F4
C274	A5	R271A	F4
C278	A5	R271B	F4
C417	B5	R279A	F4
C427	B5	R279B	F5
C437	B5	R279C	F5
C447	B5	R279D	F5
C457	C5	R284	F4
C467	C5	R288	F5
C477	C5	R748	G2
C486	C5	R758	G2
C487	D5	R768	G2
C585	D5	R778	G1
C612	D5	R789	B3
C622	A5		
C641	A5	S199	E3
C642	B5		
C652	B5	TP219	A4
C662	B5	TP292	A4
C672	B5	TP918	B4
C682	C5	TP994	B4
C690	C5		
C717	C5	U166	F1
C727	C5	U174	F2
C738	D5	U182	F3
C747	D5	U266	F1
C757	D5	U275	F5
C767	A5	U282	F4
C777	A5		
C787	B5		
C788	B5		
C892	B5		
C914	B5		
C924	C5		
C934	C5		
C944	C5		
C954	C5		
C964	D5		

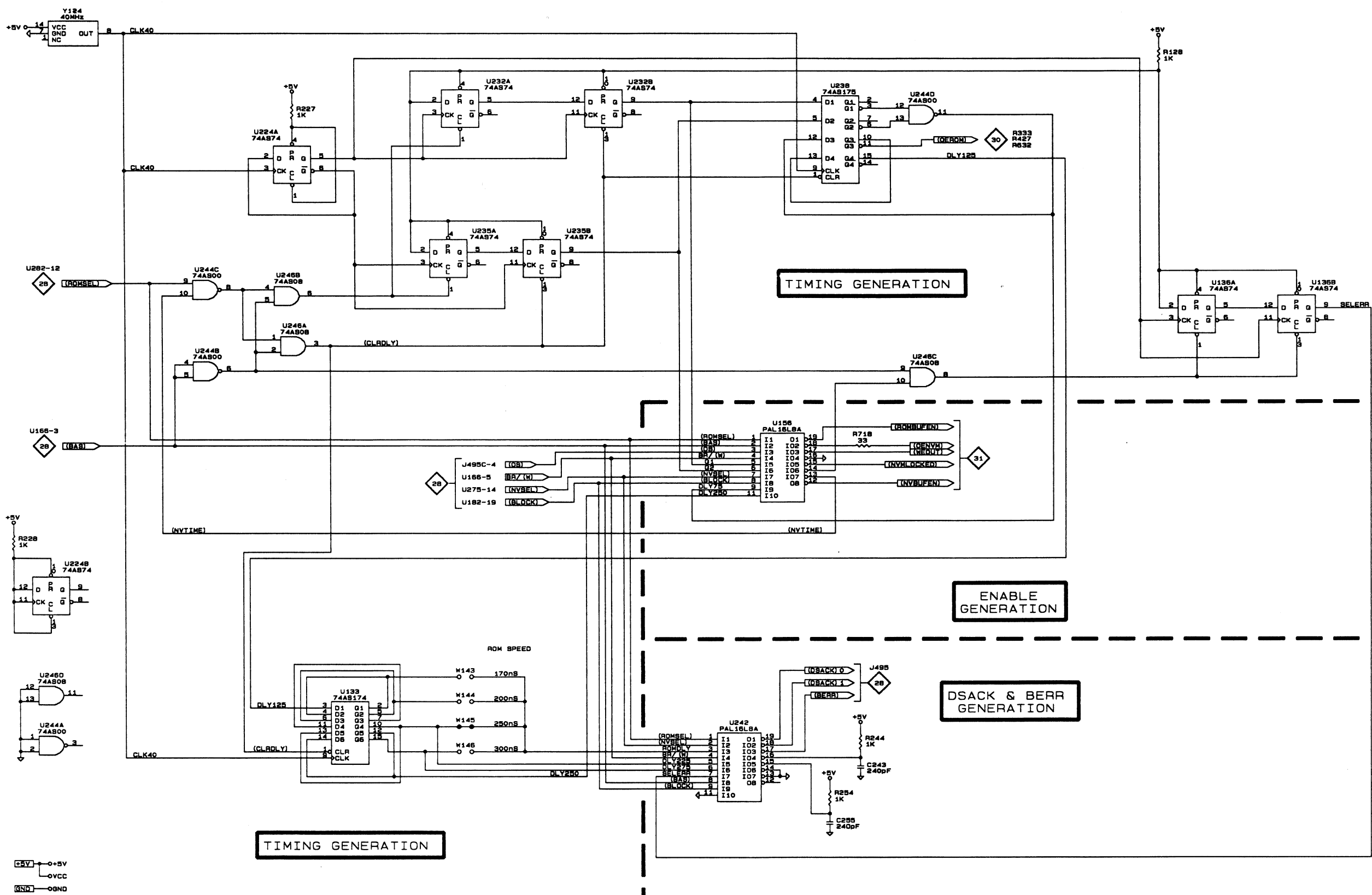
EPROM BOARD
Schematic <29> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 28, 30, and 31.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C243	E5
C255	E5
R128	G1
R227	B1
R228	A3
R244	E4
R254	E5
R718	E3
U133	C4
U136A	G2
U136B	H2
U156	E3
U224A	B2
U224B	A4
U232A	C1
U232B	D1
U235A	C2
U235B	D2
U238	E1
U242	E4
U244A	A4
U244B	B3
U244C	B2
U244D	F1
U246A	B2
U246B	B2
U246C	F3
U246D	A4
W143	C4
W144	C4
W145	C4
W146	C5
Y124	A1

A B C D E F G H



EPROM BOARD
Schematic <30> Look-Up Chart

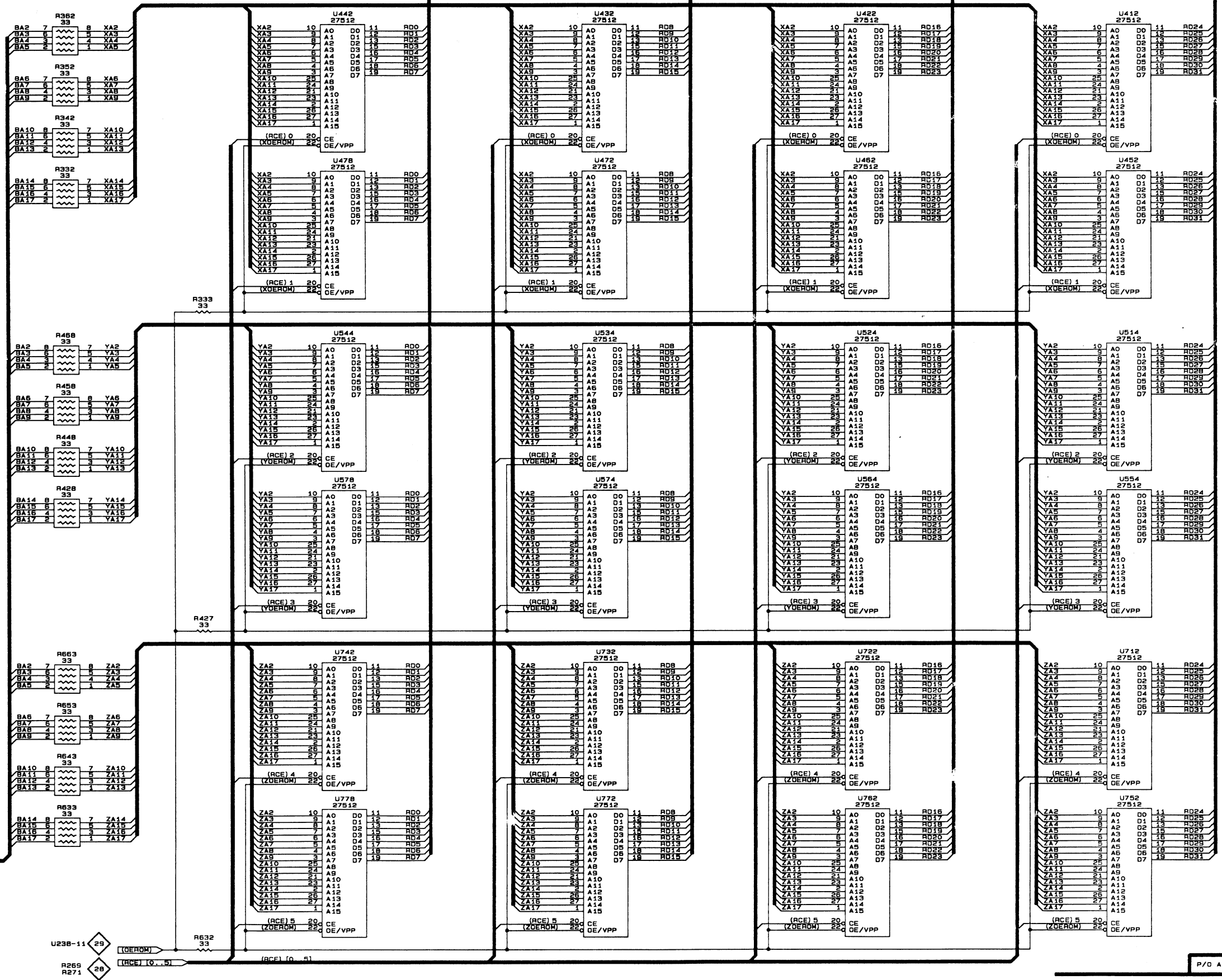
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 28, 29, and 31.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R332	B2
R333	B2
R342	B1
R352	B1
R362	B1
R427	B4
R428	B3
R448	B3
R458	B3
R468	B2
R632	B5
R633	B5
R643	B4
R653	B4
R663	B4
U412	G1
U422	F1
U432	D1
U442	C1
U452	G2
U462	F2
U472	D2
U478	C2
U514	G2
U524	F2
U534	D2
U544	C2
U554	G3
U564	F3
U574	D3
U578	C3
U712	G4
U722	F4
U732	D4
U742	C4
U752	G5
U762	F5
U772	D5
U778	C5

A B C D E F G H

OVCC
OGND



VM700

EPROM ARRAY
SN 8021014 & BELOW

672-1289-00 - 03

P/O A5A1 - 512K EPROM BOARD

30

EPROM BOARD
Schematic <31> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A6 Partial A6 also shown on Schematics 28, 29, and 30.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C945	C5
CR975	A4
CR976	A4
CR977	A5
CR978	A5
R312	G3
R374	G1
R613	G4
R737	G2
R792	G5
R946	C5
R947	D5
R976	A4
R977	A5
U482	G4
U582	G3
U684	G2
U782	G1
U794	G5
U814	D2
U824	D3
U834	D3
U844	D4
U854	F2
U864	F3
U874	F3
U884	F4
U956A	B5
U956B	B5
U956C	C5
U956D	A3
U966A	B5
U966B	B4
U966C	C5
U966D	A3

A B C D E F G H

1

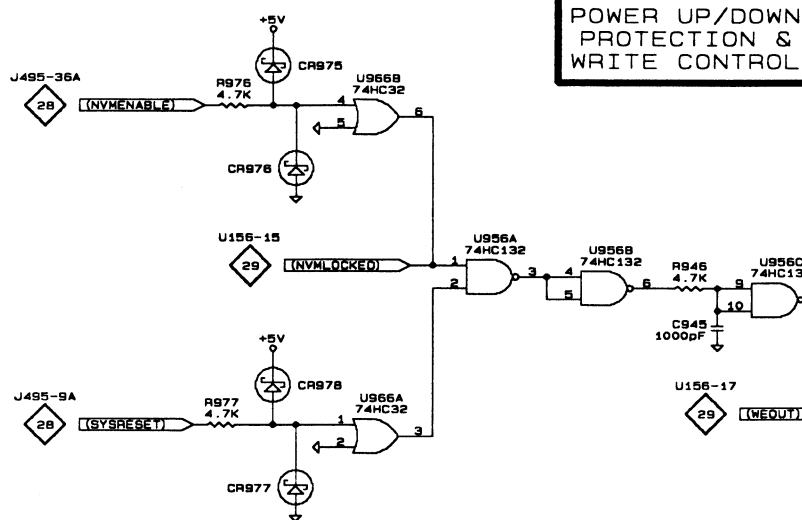
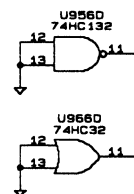
2

3

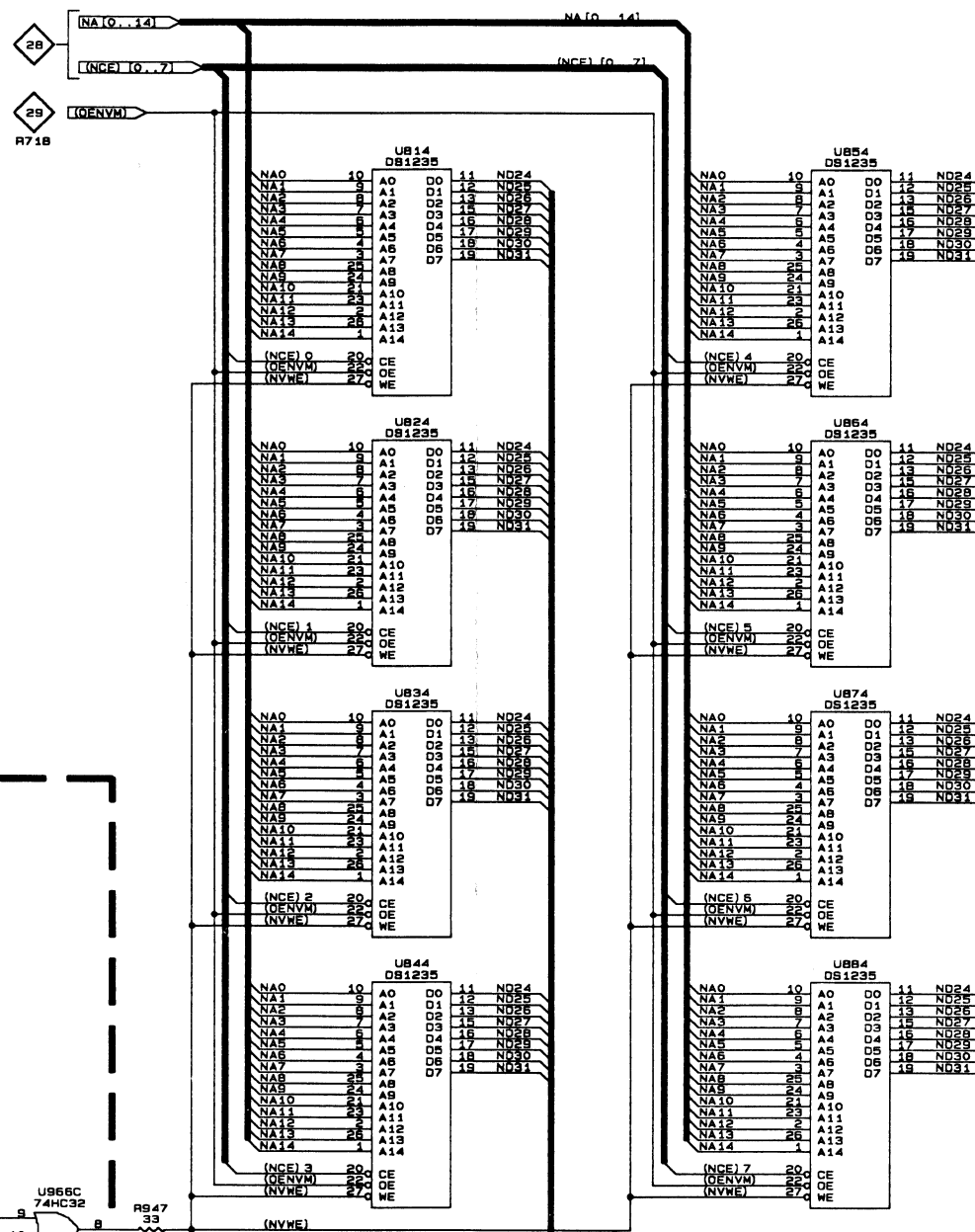
4

5

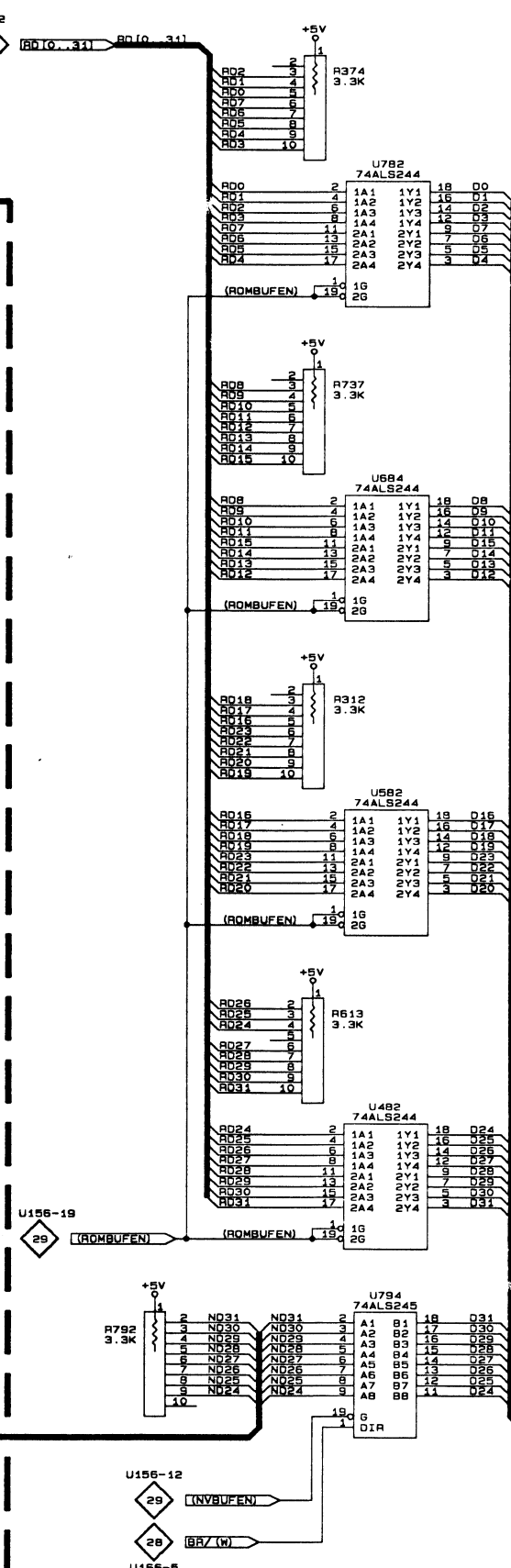
+5V
0VCC
GND 0GND



NVRAM ARRAY



DATA BUS BUFFERS



VM700

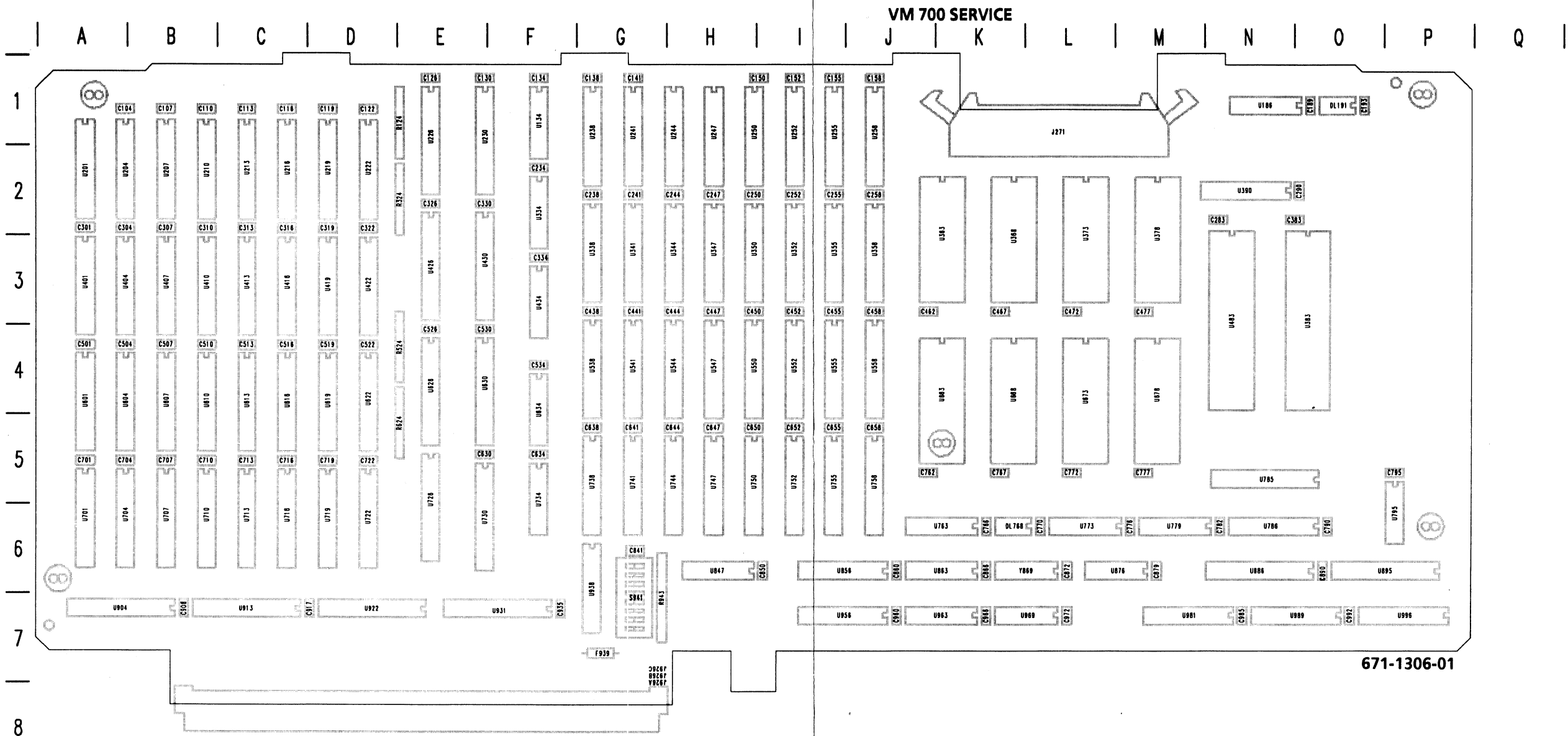
NVRAM ARRAY & DATA BUS BUFFERS

SN 8021014 & BELOW

672-1289-00-03

P/O A6A1 - 512K EPROM BOARD

31



A7 DATA ACQUISITION Board

 **Static Sensitive Devices**
See the section in this manual
on handling precautions for
static sensitive components

DATA ACQUISITION BOARD Schematic <32> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on
Schematics 33, 34, 35, 36, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
DL768	B4	U904	G1
R943	A1	U913	G2
S941	A2	U922	G2
		U931	G3
		U938	B1
		U956	E4
U763A	B4	U963A	C2
U763B	C4	U963B	C3
U773A	F3	U969A	B2
U773B	F2	U969B	C1
U773C	F2	U969C	C5
U779	E2	U969D	B4
U856	E4	U981	D5
U863A	C1		
U863B	C2	Y869	A4

A B C D E F G H

ADDRESS
DECODE

MEMORY ACCESS CONTROL

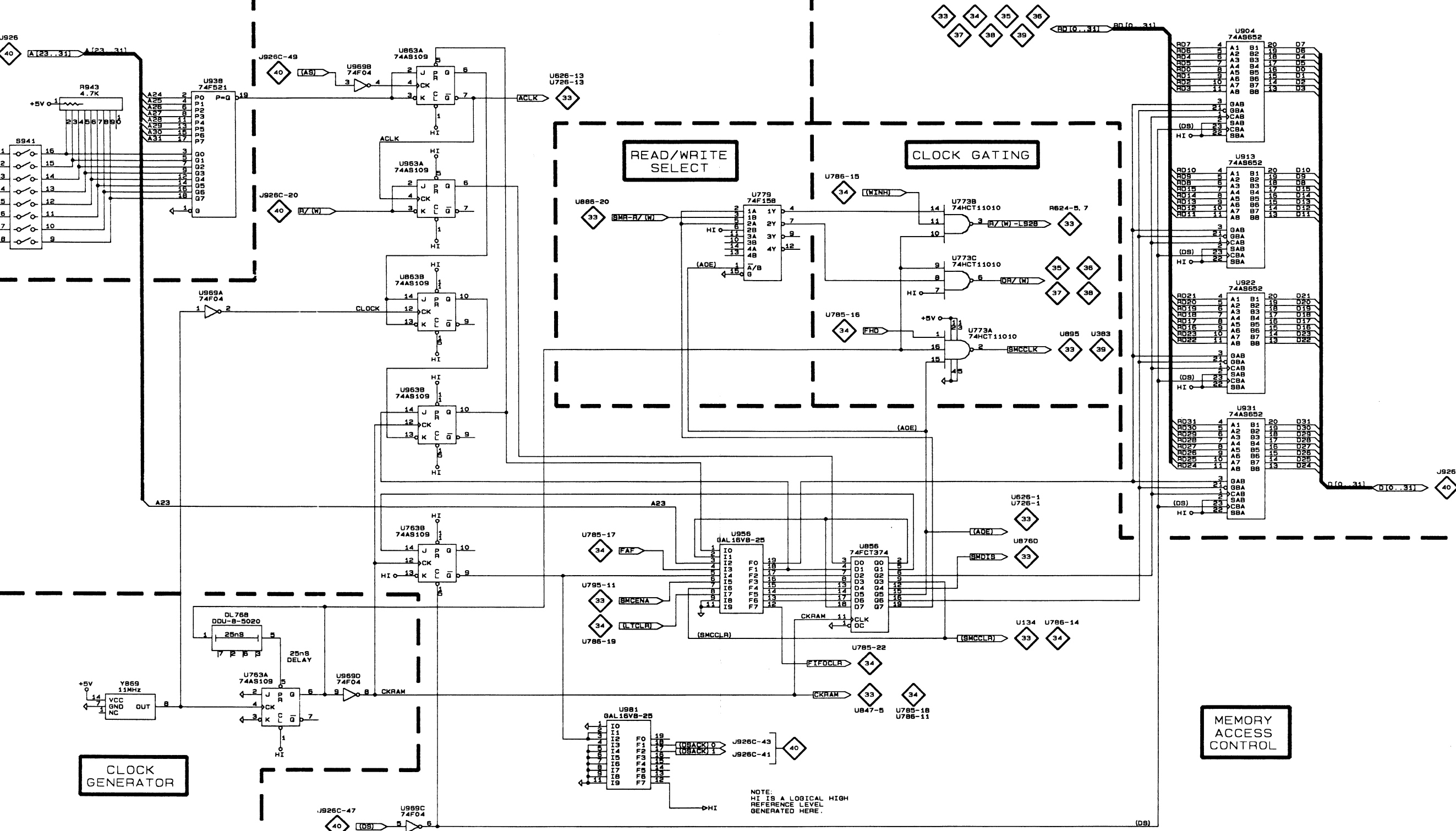
68020 DATA BUS INTERFACE

READ/WRITE
SELECT

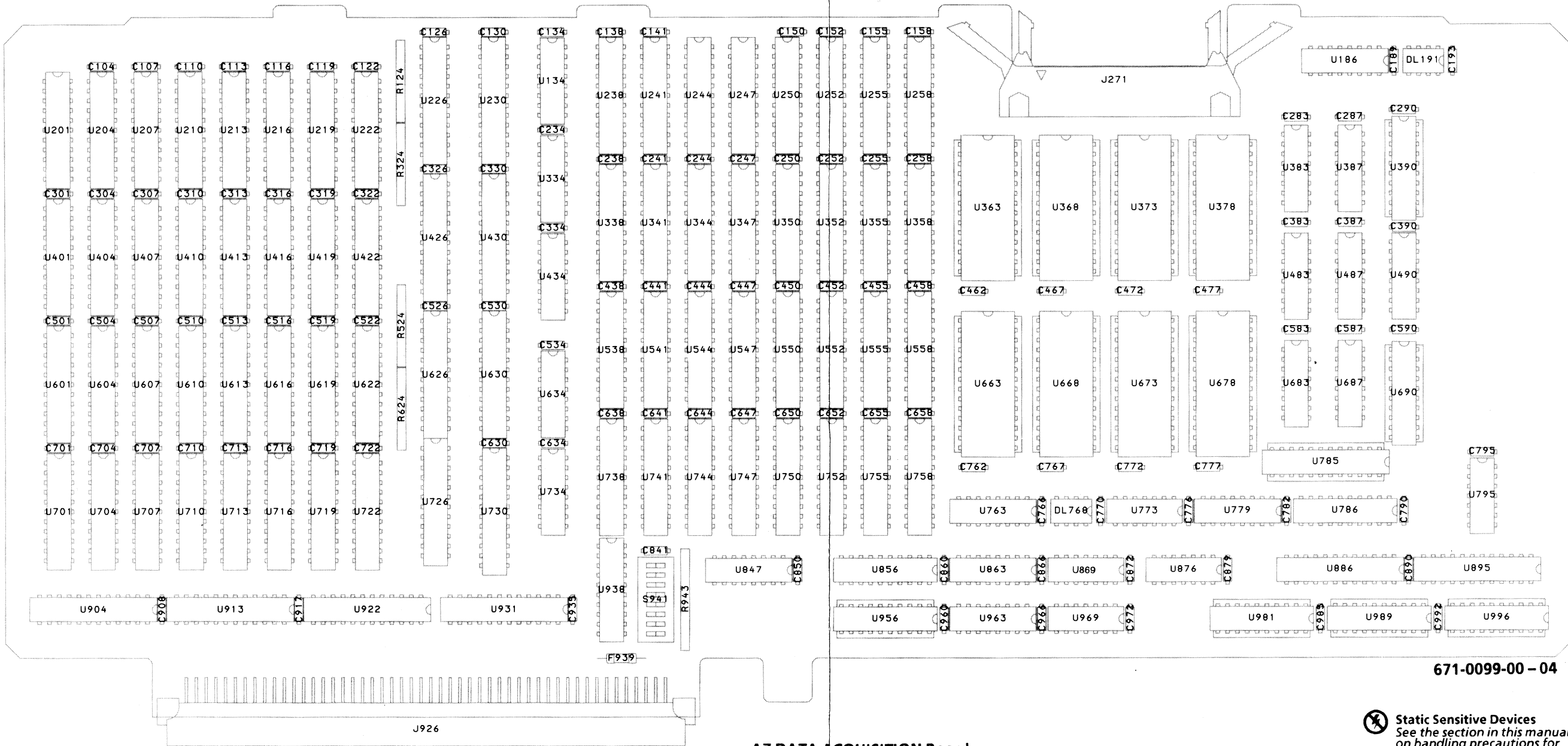
CLOCK GATING

CLOCK
GENERATOR

MEMORY
ACCESS
CONTROL



VM 700 SERVICE



A7 DATA ACQUISITION Board

Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

DATA ACQUISITION BOARD
Schematic <32> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on
Schematics 33, 34, 35, 36, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
DL768	B4	U863A	C1
R943	A1	U863B	C2
S941	A2	U904	G1
U763A	B4	U913	G2
U763B	C4	U922	G2
U773A	E1	U931	G3
U773B	E2	U938	B1
U773C	E2	U956	E4
U779	E2	U963A	C2
U786B	F2	U963B	C3
U856	F4	U969A	B3
		U969B	C1
		U969C	C5
		U981	D5

A B C D E F G H

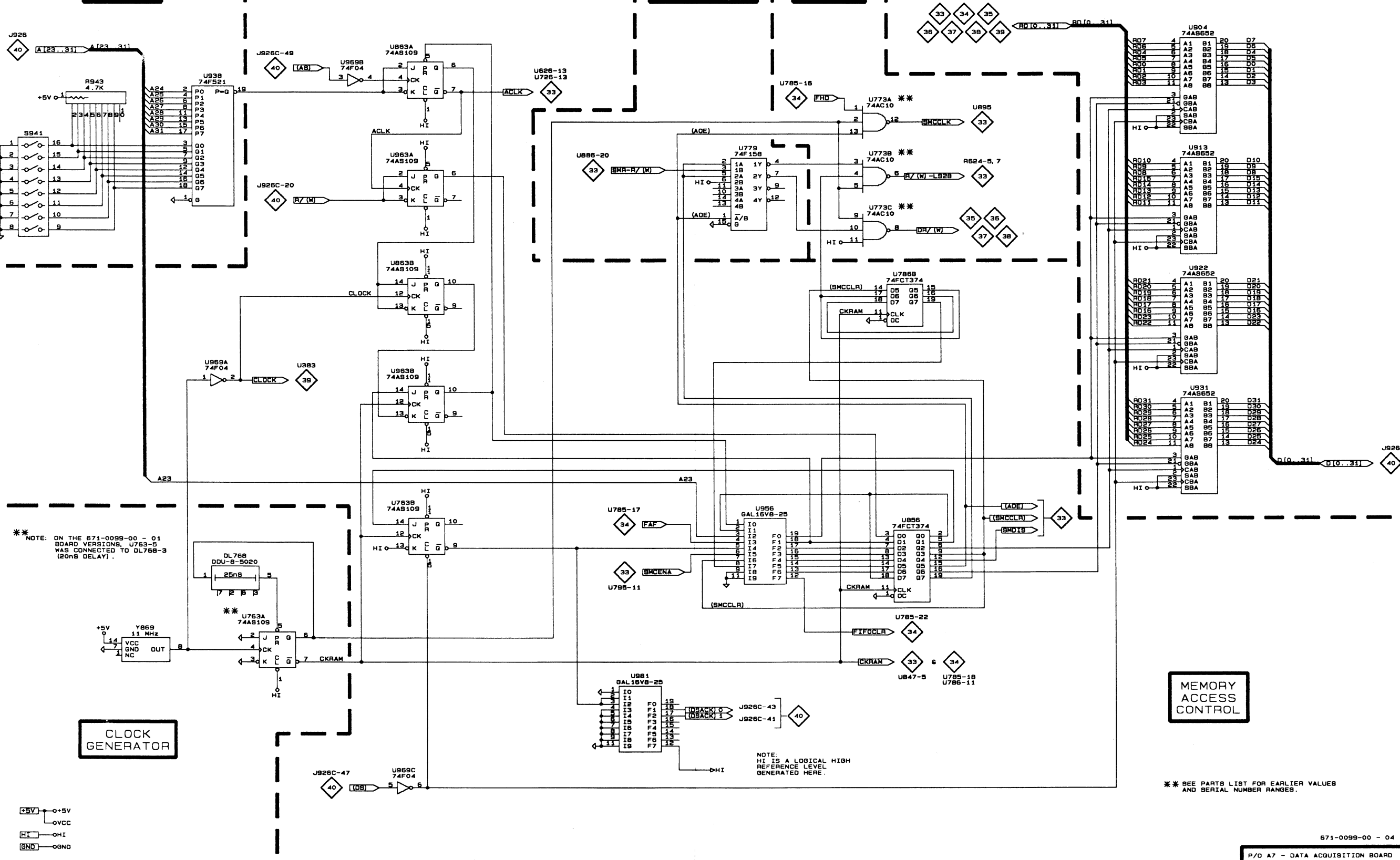
ADDRESS
DECODE

MEMORY ACCESS CONTROL

READ/WRITE
SELECT

CLOCK
GATING

68020 DATA BUS INTERFACE



NOTE: ON THE 671-0099-00 - 01 BOARD VERSIONS, U763-5 WAS CONNECTED TO DL768-3 (20nS DELAY).

CLOCK
GENERATOR

MEMORY
ACCESS
CONTROL

+5V
+5V
+VCC
HI
GND
OGND

** SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

NOTE:
HI IS A LOGICAL HIGH
REFERENCE LEVEL
GENERATED HERE.

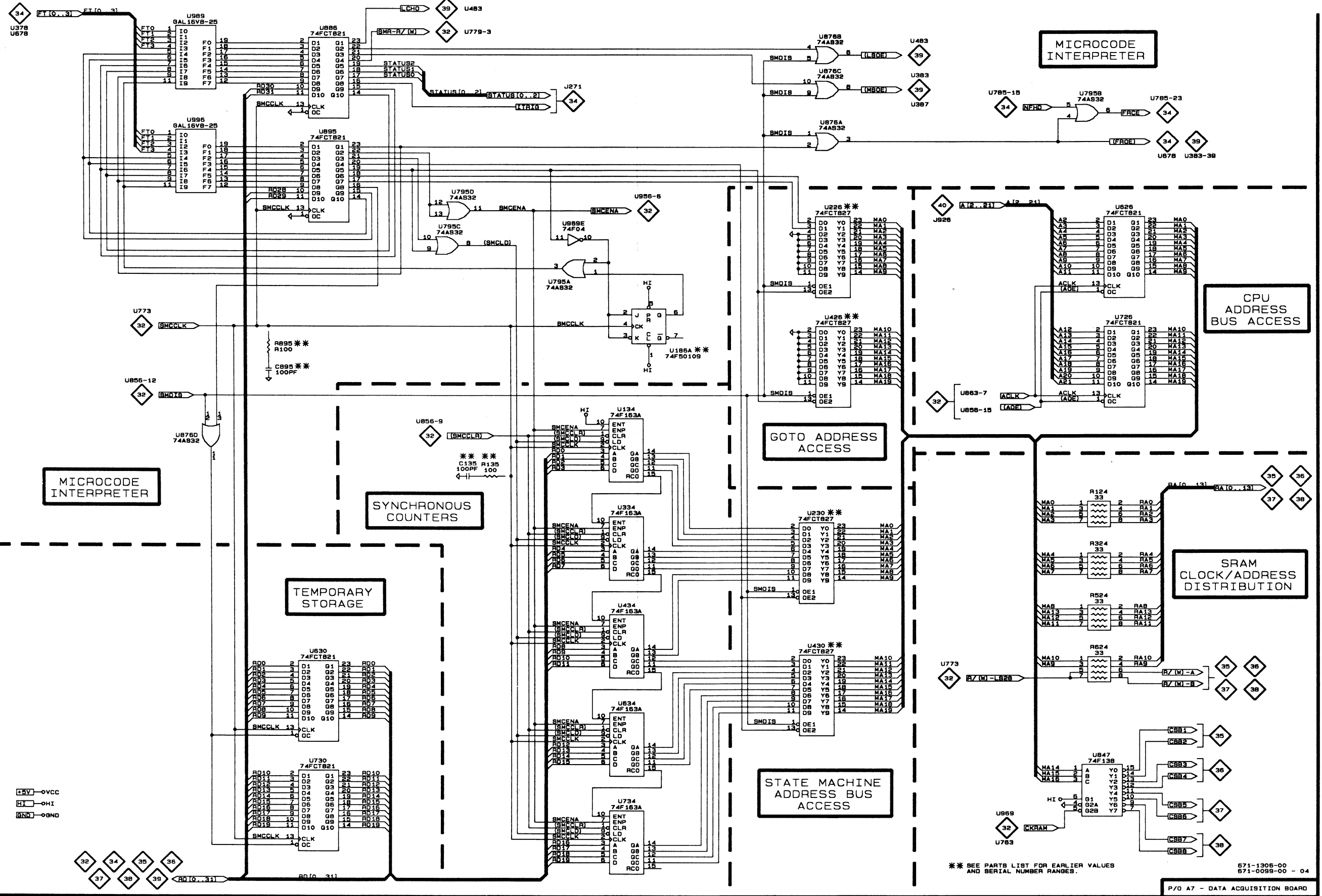
DATA ACQUISITION BOARD
Schematic <33> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 34, 35, 36, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R124	G3
R324	G4
R524	G4
R624	G4
U134	D3
U186A	D2
U226	F2
U230	E3
U334	D3
U426	F2
U430	E4
U434	D4
U626	G2
U630	C4
U634	D4
U726	G2
U730	C5
U734	D5
U795A	D2
U795B	G1
U795C	C2
U795D	C2
U847	G5
U876A	F1
U876B	F1
U876C	F1
U876D	B3
U886	C1
U895	C1
U969E	D2
U989	B1
U996	B1

A B C D E F G H

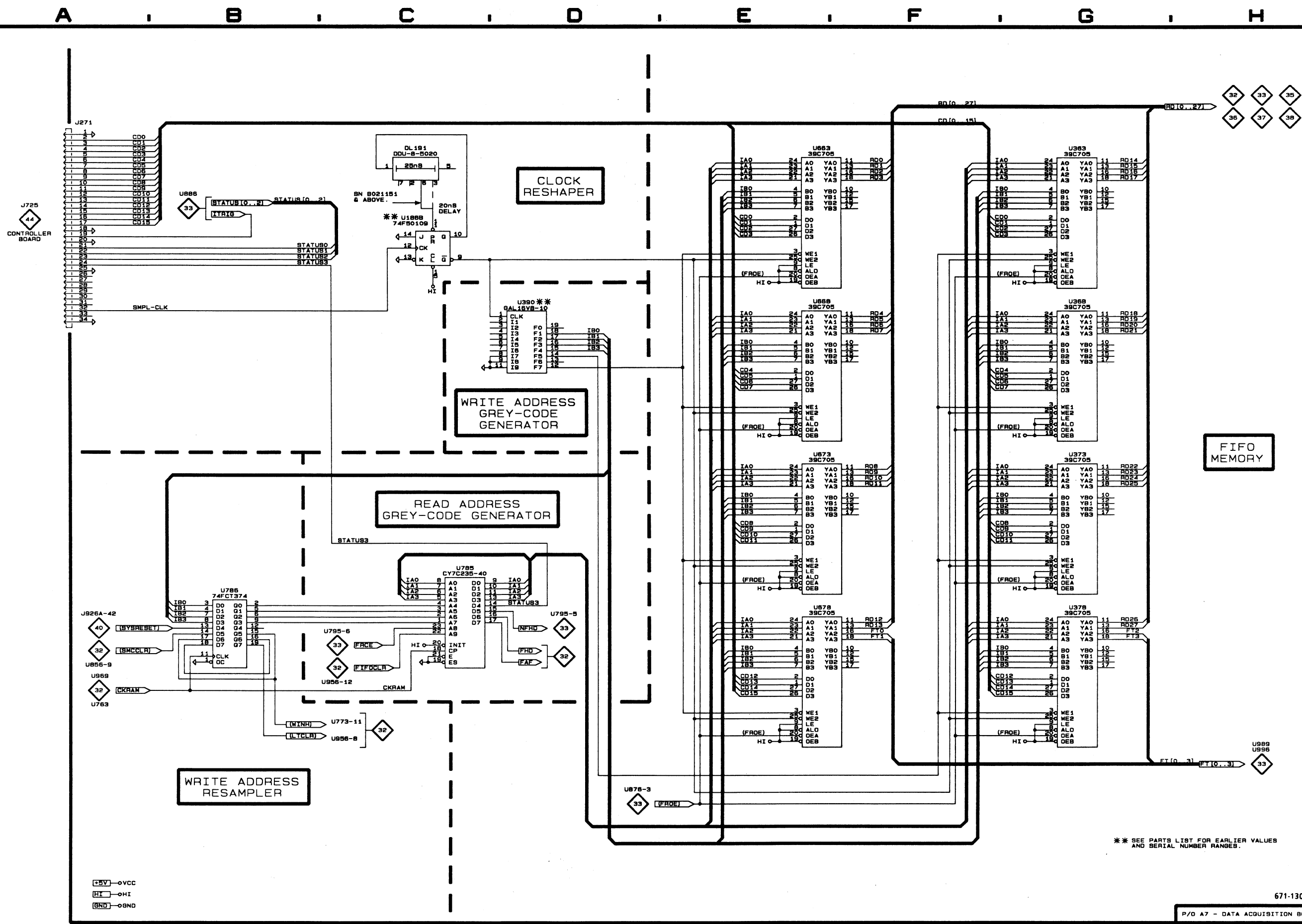


DATA ACQUISITION BOARD
Schematic <34> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 35, 36, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
DL191	C1
J271	A1
U186B	C2
U363	G1
U368	G2
U373	G3
U378	G4
U390	D2
U663	E1
U668	E2
U673	E3
U678	E4
U785	C4
U786	B4



** SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

DATA ACQUISITION BOARD
Schematic <34> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 35, 36, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
DL191	C1
J271	A1
U186B	C2
U363	G1
U368	G2
U373	G3
U378	G4
U390	D2
U663	E1
U668	E2
U673	E3
U678	E4
U785	C4
U786A	B4

A B C D E F G H

1
2
3
4
5

32 33 35
36 37 38

U989
U996
33

671-0095-00 - 04

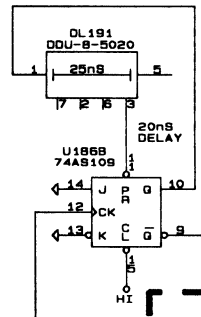
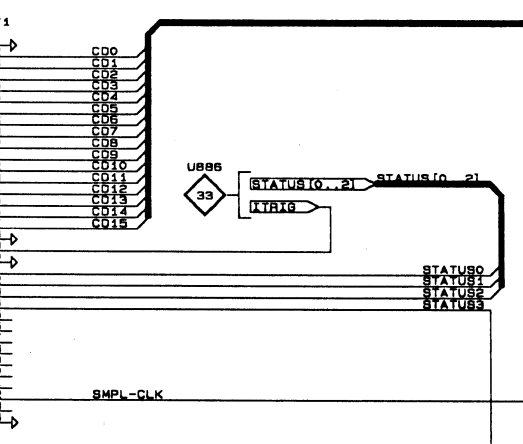
P/O A7 - DATA ACQUISITION BOARD

VIDEO FIFO
SN 8021147 & BELOW

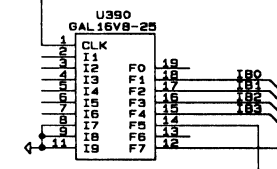
34

J725
CONTROLLER
BOARD

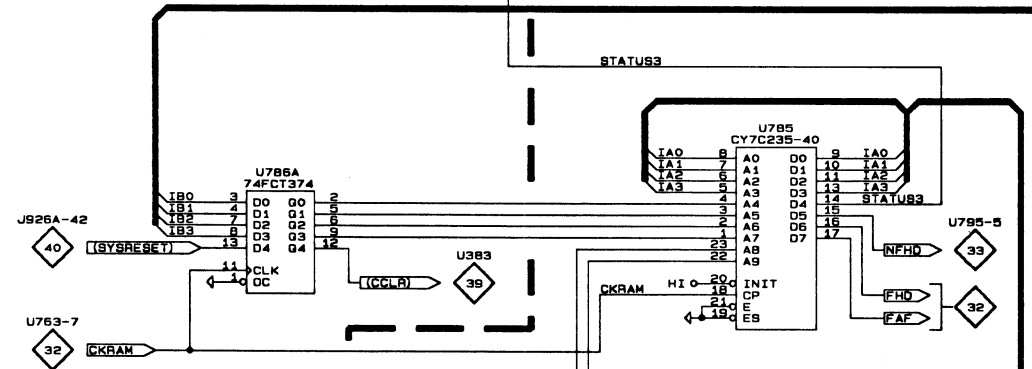
J271
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34



CLOCK
RESAPER



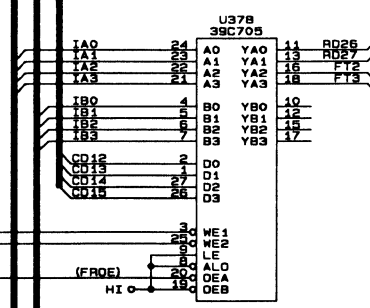
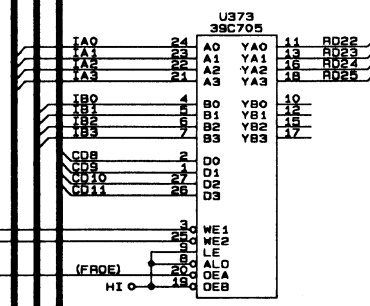
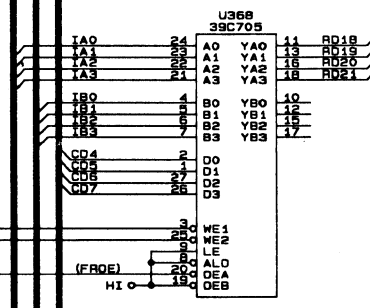
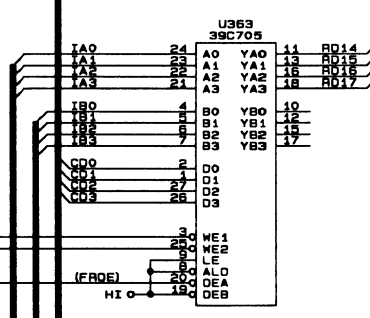
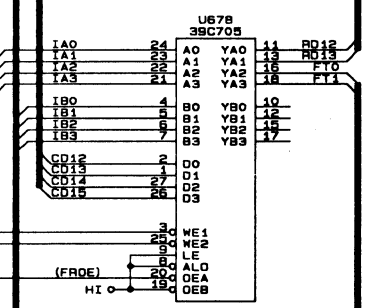
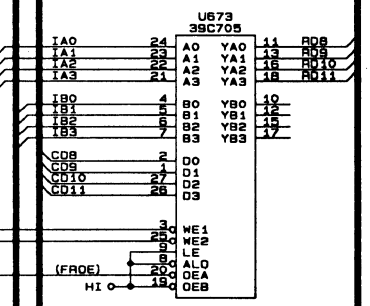
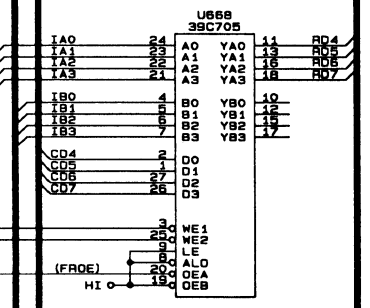
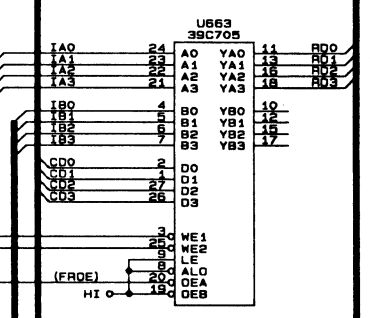
WRITE ADDRESS
GREY-CODE
GENERATOR



WRITE ADDRESS
RESAMPLER

READ ADDRESS
GREY-CODE GENERATOR

5V - OVCC
HI - OHI
GND - OGND



FIFO
MEMORY

VM700

VM 700 SERVICE

DATA ACQUISITION BOARD Schematic <35> Look-Up Chart

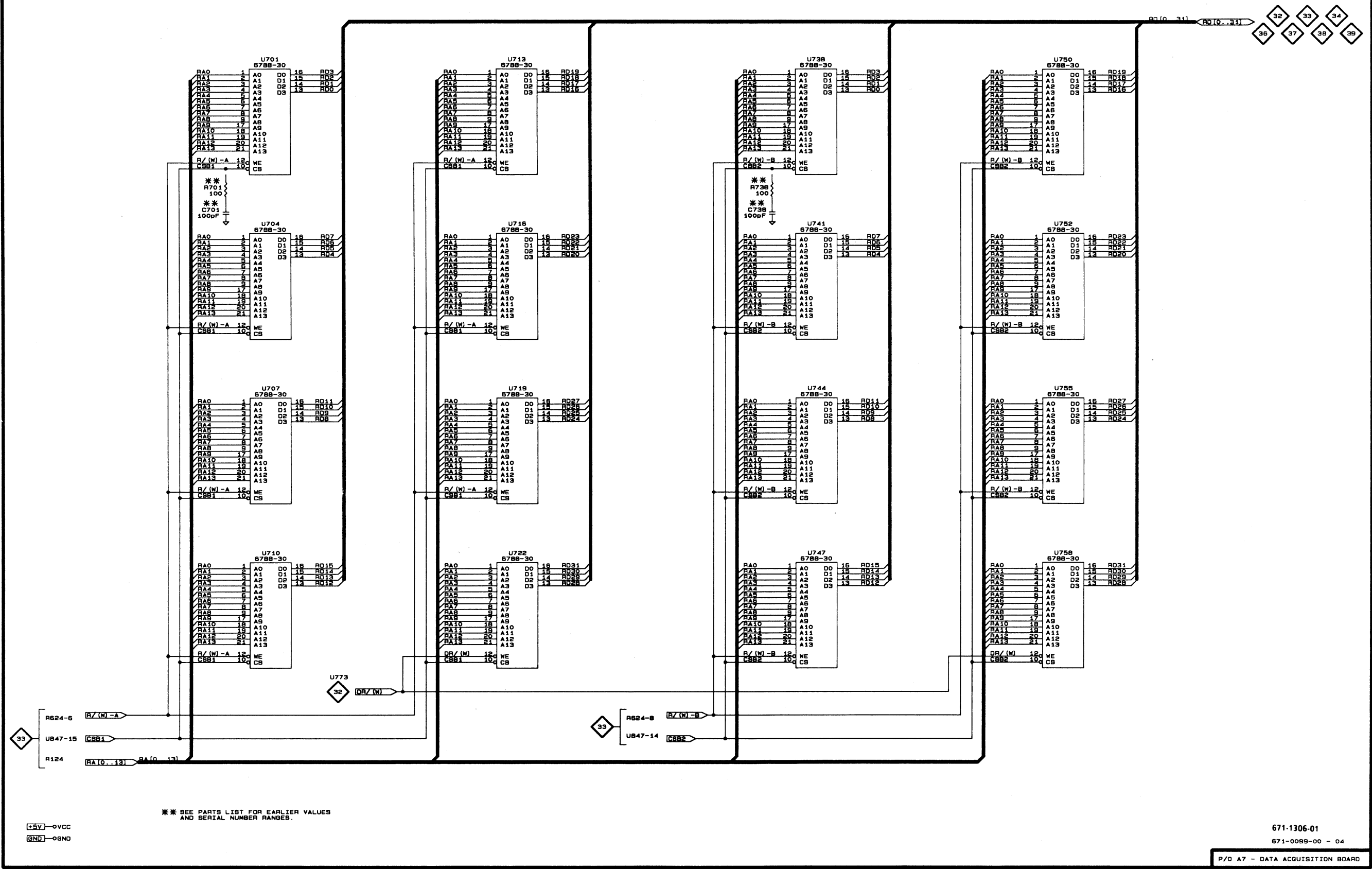
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 34, 36, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U701	B1
U704	B2
U707	B3
U710	B4
U713	C1
U716	C2
U719	C3
U722	C4
U738	E1
U741	E2
U744	E3
U747	E4
U750	G1
U752	G2
U755	G3
U758	G4

A B C D E F G H

1
2
3
4
5



DATA ACQUISITION BOARD Schematic <36> Look-Up Chart

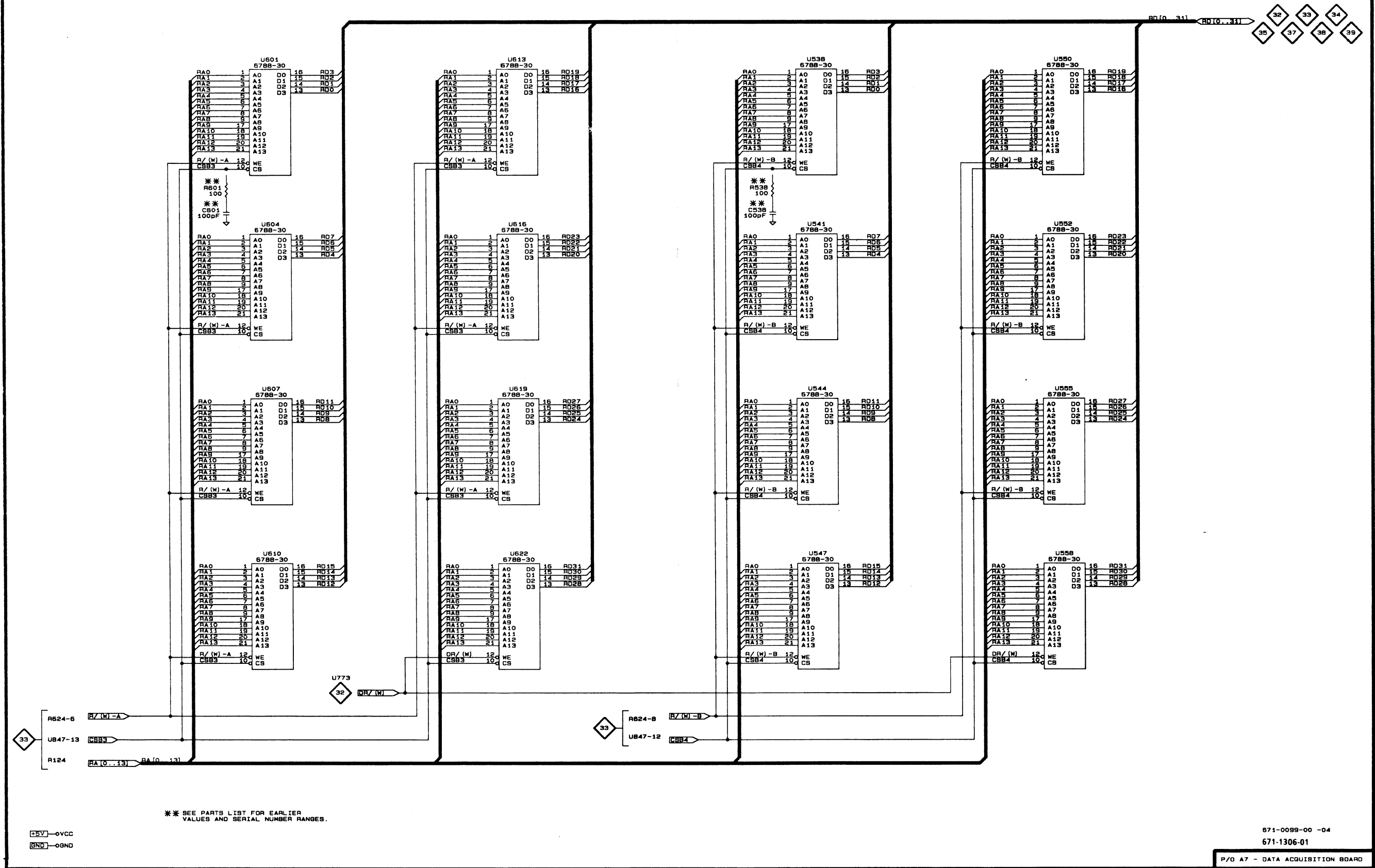
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 34, 35, 37, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U538	E1
U541	E2
U544	E3
U547	E4
U550	G1
U552	G2
U555	G3
U558	G4
U601	B1
U604	B2
U607	B3
U610	B4
U613	C1
U616	C2
U619	C3
U622	C4

A B C D E F G H

1
2
3
4
5



DATA ACQUISITION BOARD
Schematic <37> Look-Up Chart

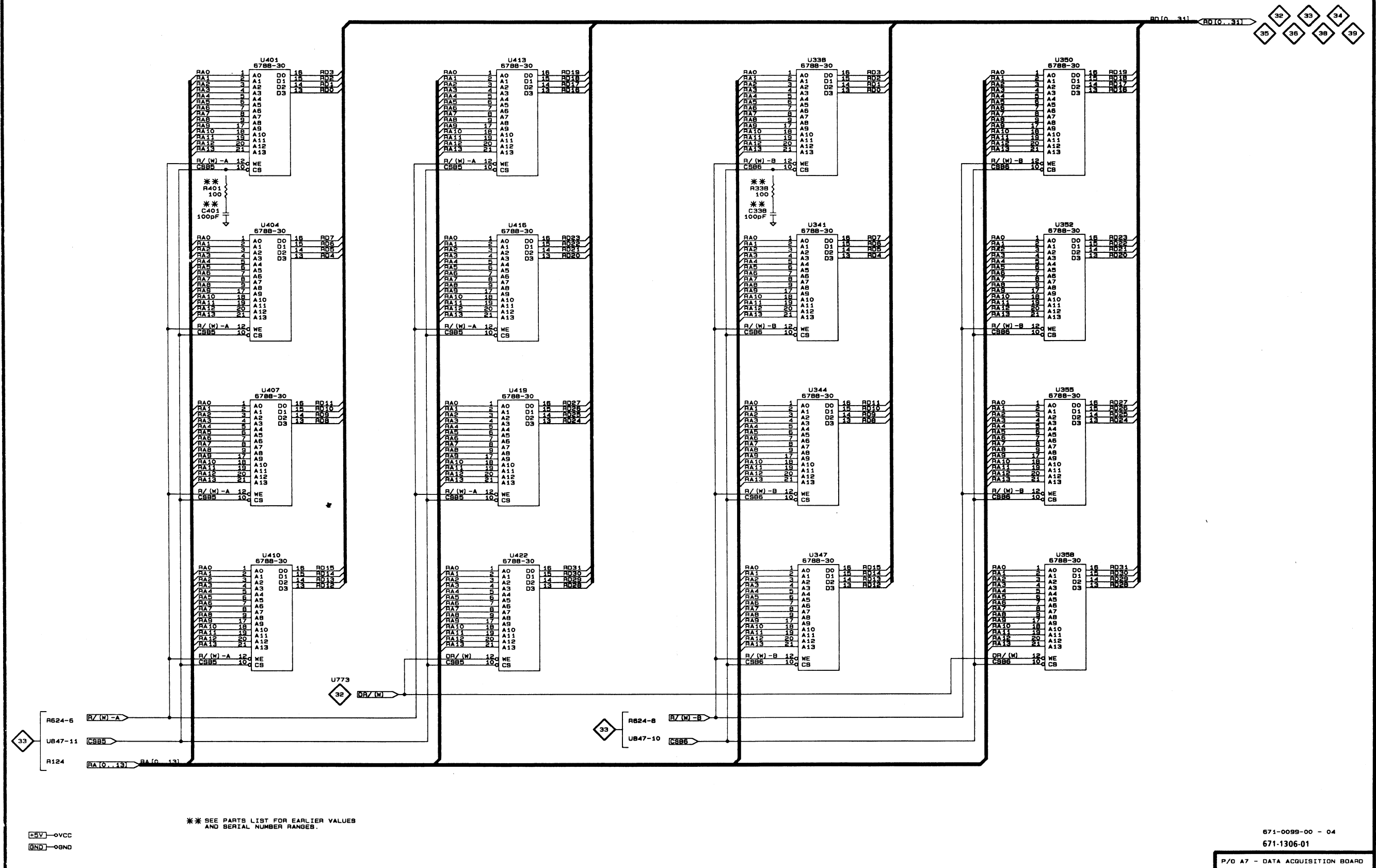
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 34, 35, 36, 38, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U338	E1
U341	E2
U344	E3
U347	E4
U350	G1
U352	G2
U355	G3
U358	G4
U401	B1
U404	B2
U407	B3
U410	B4
U413	C1
U416	C2
U419	C3
U422	C4

A B C D E F G H

1
2
3
4
5



DATA ACQUISITION BOARD
Schematic <38> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

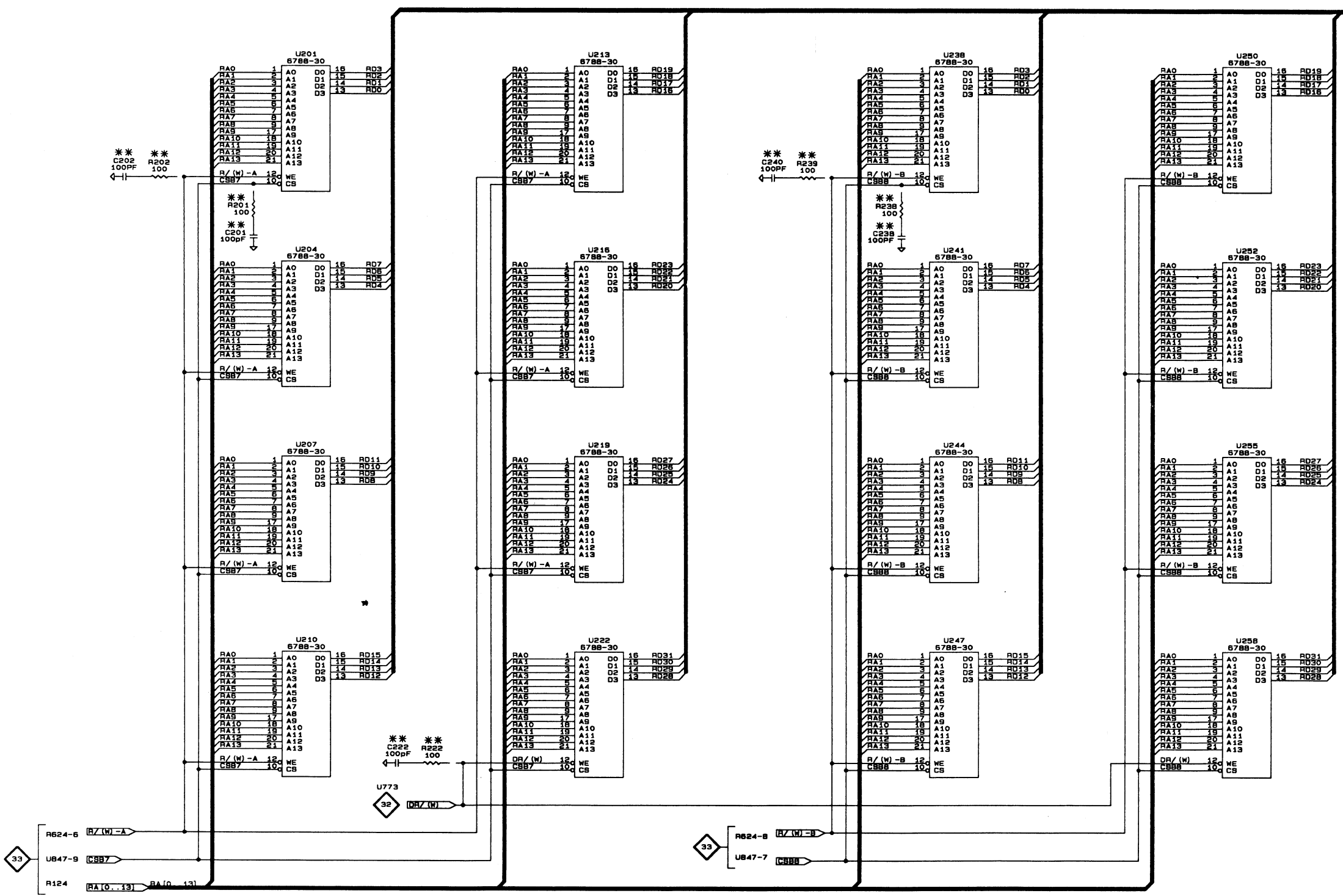
ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 34, 35, 36, 37, 39, and 40.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U201	B1
U204	B2
U207	B3
U210	B4
U213	C1
U216	C2
U219	C3
U222	C4
U238	E1
U241	E2
U244	E3
U247	E4
U250	G1
U252	G2
U255	G3
U258	G4

A B C D E F G H

1
2
3
4
5

32 33 34
35 36 37 38



** SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES.

(+5V) -OVCC
(GND) -OGND

671-0099-00 - 04
671-1306-01
P/O A7 - DATA ACQUISITION BOARD

DATA ACQUISITION BOARD Schematic <39> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 34, 35, 36, 37, 38, and 40.

CIRCUIT NUMBER	* SCHEMATIC LOCATION
U383	E2
U483	E3

A B C D E F G H

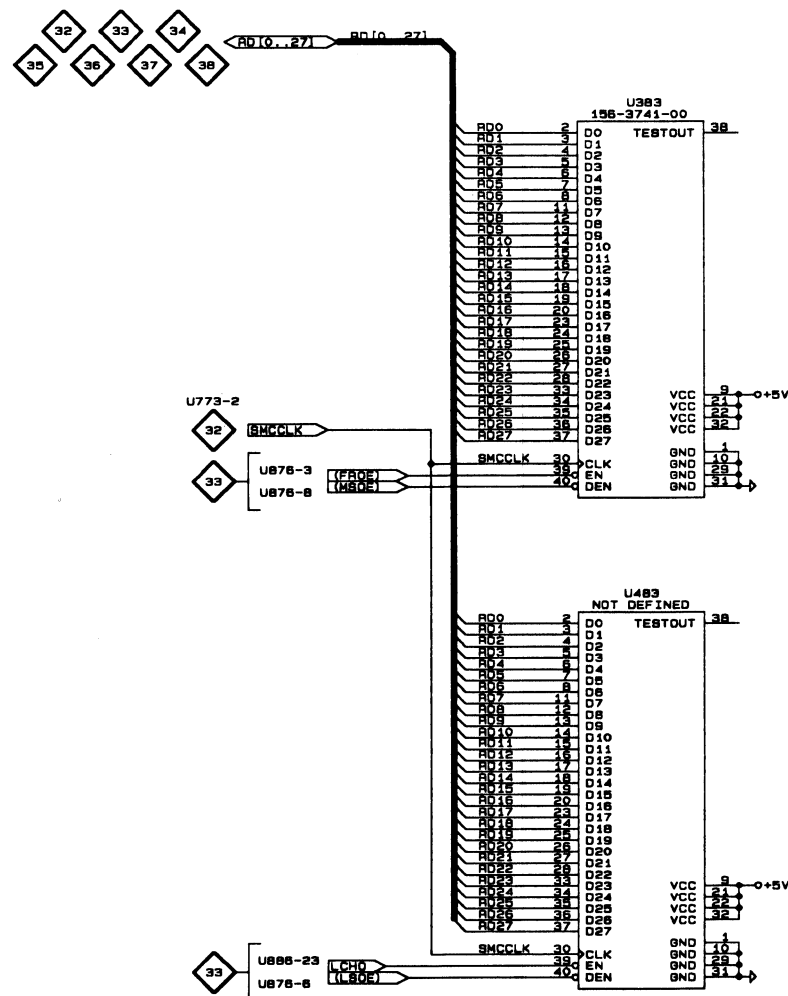
1

2

3

4

5



671-1306-01

P/O A7 - DATA ACQUISITION BOARD

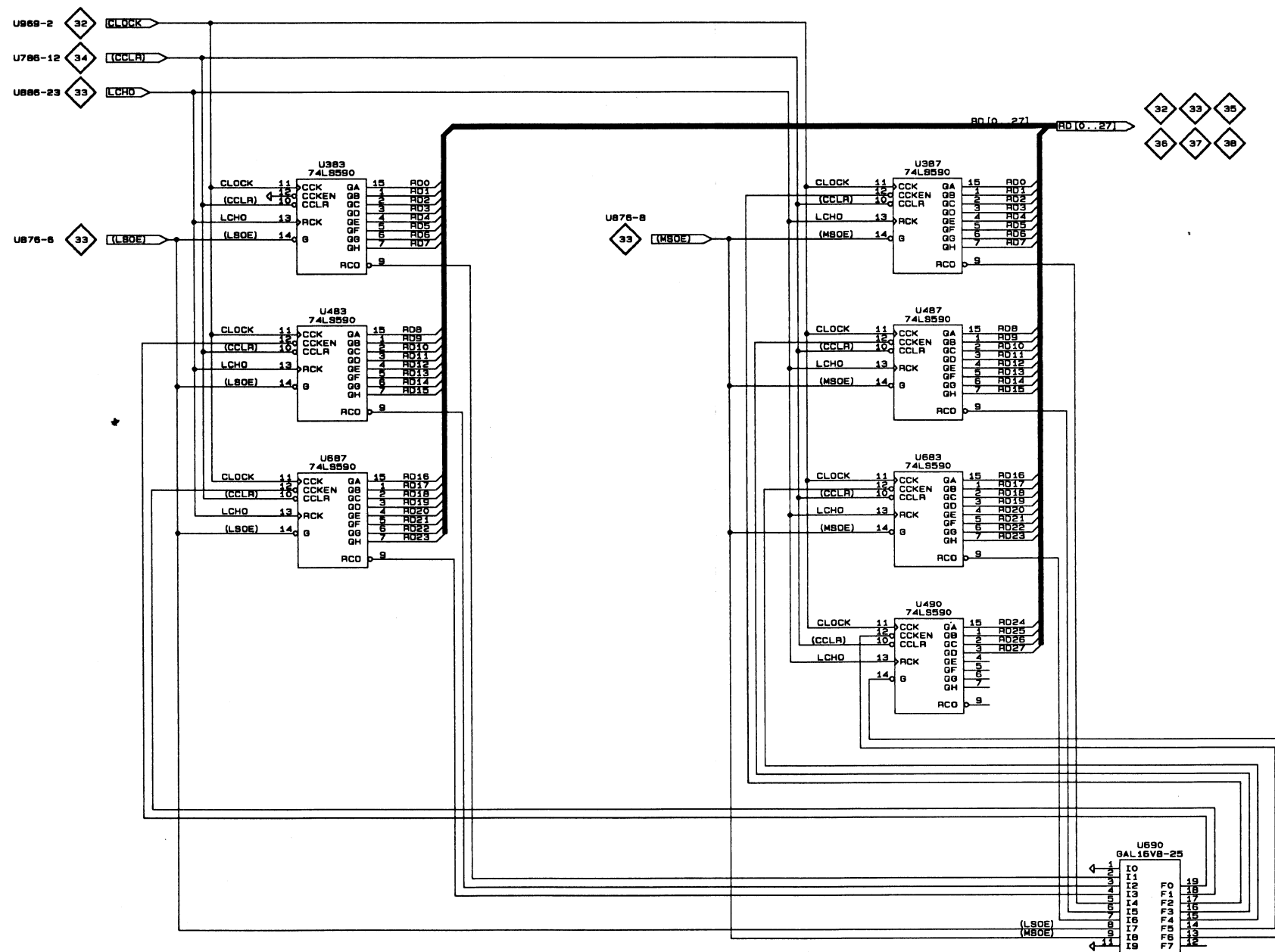
VM 700

MIN-MAX ASIC
SN 8021148 & ABOVE

39

A B C D E F G H

1
2
3
4
5



OVCC
GND

DATA ACQUISITION BOARD
Schematic <40> Look-Up Chart

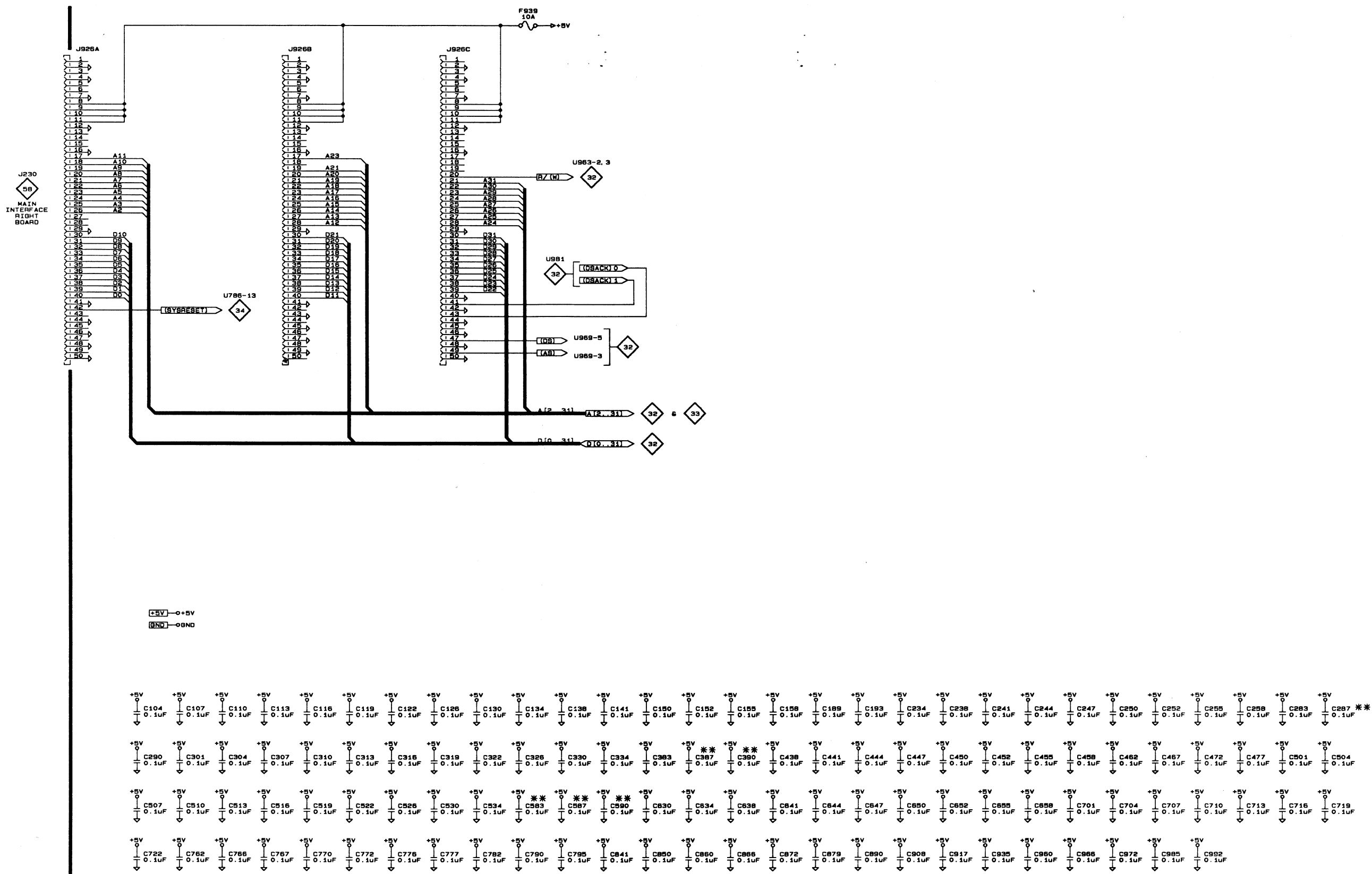
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A7 Partial A7 also shown on Schematics 32, 33, 34, 35, 36, 37, 38, and 39.

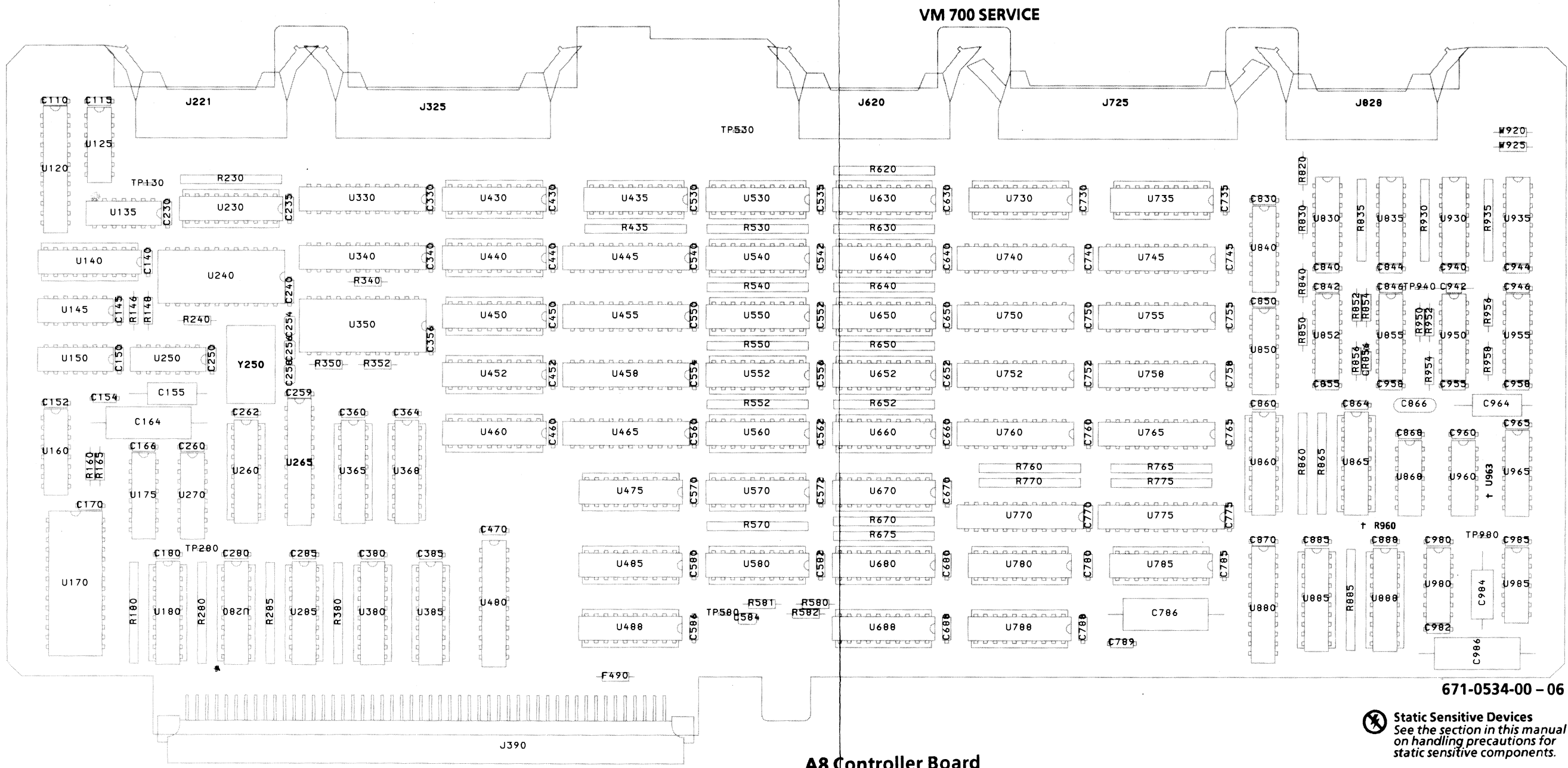
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C104	A4	C513	B5
C107	B4	C516	B5
C110	B4	C519	C5
C113	B4	C522	C5
C116	B4	C526	C5
C119	C4	C530	C5
C122	C4	C534	C5
C126	C4	C583 *	D5
C130	C4	C587 *	D5
C134	C4	C590 *	D5
C138	D4	C630	D5
C141	D4	C634	D5
C150	D4	C638	D5
C152	D4	C641	D5
C155	E4	C644	E5
C158	E4	C647	E5
C189	E4	C650	E5
C193	E4	C652	E5
C234	F4	C655	F5
C238	F4	C658	F5
C241	F4	C701	F5
C244	F4	C704	F5
C247	G4	C707	G5
C250	G4	C710	G5
C252	G4	C713	G5
C255	G4	C716	G5
C258	G4	C719	G5
C283	A5	C722	A5
C287 *	H4	C762	B5
C290	B5	C766	B5
C301	B5	C767	B5
C304	B5	C770	B5
C307	B5	C772	C5
C310	C5	C776	C5
C313	C5	C777	C5
C316	C5	C782	C5
C319	C5	C790	C5
C322	C5	C795	D5
C326	D5	C841	D5
C330	D5	C850	D5
C334	D5	C860	D5
C383	D5	C866	E5
C390 *	E5	C872	E5
C438	E5	C879	E5
C441	E5	C890	E5
C444	E5	C908	F5
C447	E5	C917	F5
C450	F5	C935	F5
C452	F5	C960	F5
C455	F5	C966	G5
C458	F5	C972	G5
C462	G5	C985	G5
C467	G5	C992	G5
C472	G5		
C477	G5	F939	D1
C501	G5		
C504	A5	J926A	A1
C507	B5	J926B	B1
C510	B5	J926C	C1

A B C D E F G H

1
2
3
4
5



671-1306-01
671-0099-00 - 04
P/O A7 - DATA ACQUISITION BOARD



671-0534-00 - 06

⊗ Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

A8 Controller Board

CONTROLLER BOARD Schematic <41> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A8 Partial A8 also shown on
Schematics 42, 43, 44, 45, and 46.

† Components located on the back of the board.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C155	B4	TP130	B4
C164	B4	TP280	B4
C786	B4	TP530	B4
C964	B4	TP580	B4
C984	B4	TP940	B4
C986	B4	TP980	C4
F490	D1	U180	G4
J390A	A1	U280	G4
J390B	B1	U285	G4
J390C	C1	U365	E2
R180	F4	U380	G3
R280	F4	U385	E4
R285	F4	U480	E3
R380	F3	U485	E4
		U488	E5

CONTROLLER BOARD
Schematic <42> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A8 Partial A8 also shown on Schematics 41, 43, 44, 45, and 46.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C254	F3
C256	G3
C258	F3
R146	H2
R148	H2
R160	B1
R165	A1
R240	H3
R340	F3
R350	F3
R352	F3
R840	E3
R850	E3
R960 *	
U120	E5
U125A	F4
U125B	E4
U135B	F4
U140	G4
U145	D5
U150A	D1
U150B	D1
U160	B1
U170	C1
U175	B4
U240	G2
U250A	F3
U250B	F4
U250C	B1
U250D	F2
U260	F2
U265	C2
U270	B4
U330	B5
U340	C3
U350	G3
U368	B3
U852	D3
U960B	F2
U980A	G4
U980B	H1
U963 *	
Y250	B2

* See Parts Lists For Serial Number Ranges



CONTROLLER BOARD
Schematic <43> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A8 Partial A8 also shown on Schematics 41, 42, 44, 45, and 46.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C942	C3	U830B	A4
J828	A2	U830C	A5
R582	G3	U830D	A5
R620	G3	U835A	B1
R820	C3	U835B	B1
R830	B3	U835C	B1
R835A	B1	U835D	B1
R835B	B1	U860	F3
R835C	B1	U865	F1
R835D	B1	U868A	H4
R860B	G2	U868B	G5
R860C	G2	U868C	G2
R860D	G2	U868D	G5
R860E	G2	U880	G3
R865B	G2	U885	F2
R865C	G2	U888	F4
R865D	G2	U930A	B2
R865E	G2	U930B	B2
R885A	G3	U930C	B2
R885B	G3	U930D	B2
R885C	G3	U935A	C4
R885D	G3	U935B	C4
R885E	G3	U935C	C3
R930A	B2	U935D	C4
R930B	B2	U950	C3
R930C	B2	U955A	C5
R930D	B2	U955B	C4
R935A	B4	U955D	D3
R935B	B4	U960A	G5
R935C	B4	U965	G4
R950	D3	U985A	H4
R952	D3	U985B	H4
R954	C3	U985C	A4
R956	B5	U985D	A4
R958	B4	W920	C4
U135A	D3	W925	C4
U580	F5		
U630	G3		
U730	G1		
U735	G1		
U830A	C3		

A B C D E F G H

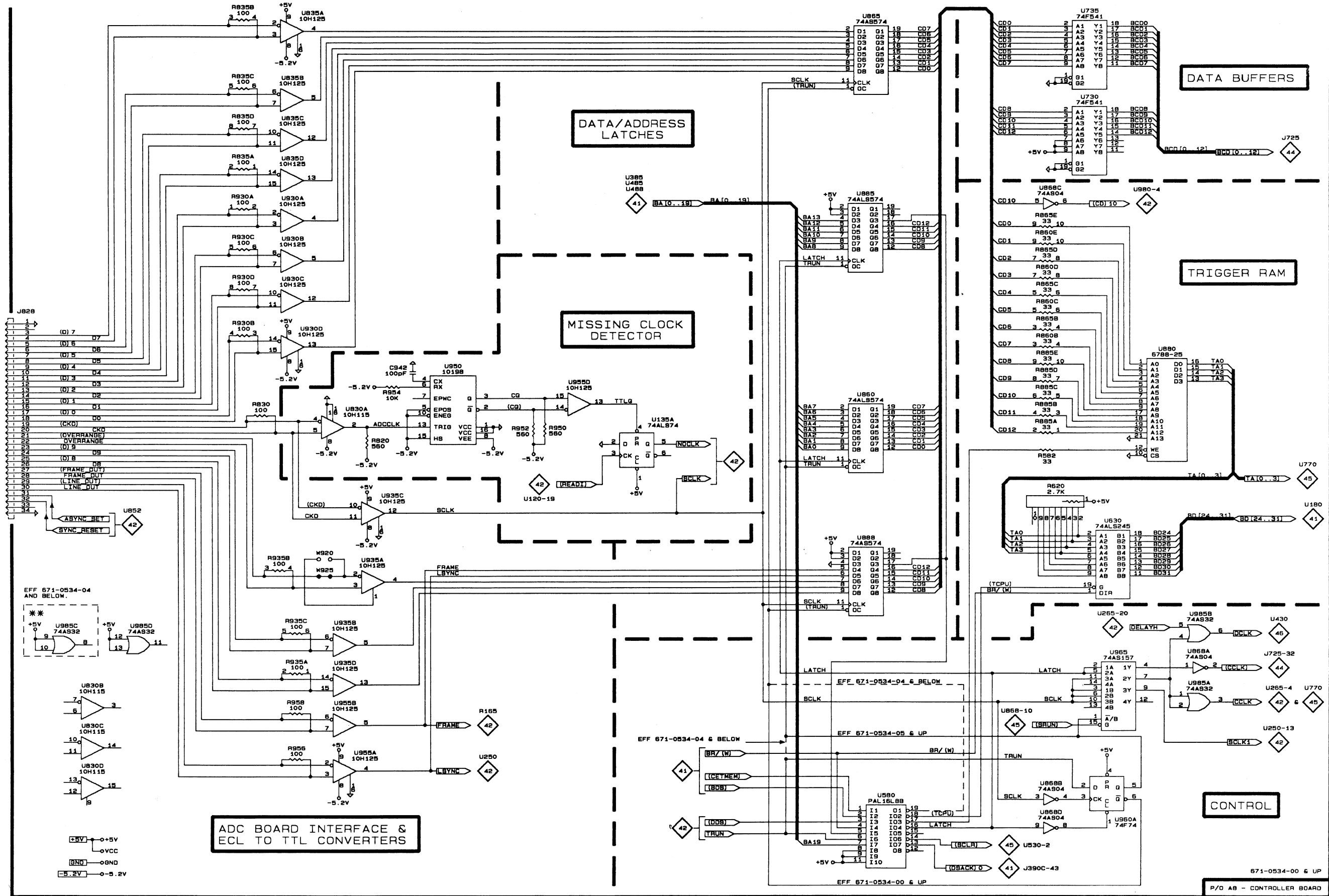
1

2

3

4

5



CONTROLLER BOARD
Schematic <44> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A8 Partial A8 also shown on Schematics 41, 42, 43, 45, and 46.

CIRCUIT NUMBER	SCHEMATIC LOCATION
J221	H4
J620	H2
J725	H1
R230	F3
R435	F5
R570	C4
R630	B2
R640	B2
R650	B1
R652	B1
U230	E3
U435	E5
U570	B4
U640	C2
U650	C2
U652	C1
U660	C1
U780	B5
U785	B4

A B C D E F G H

1
2
3
4
5

+5V
0VCC
GND

BR/ (W)
[CSMEM]
[BAS]
[BDS]

BRUN

U385
U485
U488

R652
2.7K

R650
2.7K

R640
2.7K

R630
2.7K

U850
SDIO 311

U850
74ALS245
A1 B1 18 SD00
A2 B2 17 SD01
A3 B3 16 SD02
A4 B4 15 SD03
A5 B5 14 SD04
A6 B6 13 SD05
A7 B7 12 SD06
A8 B8 11 SD07

U852
74ALS245
A1 B1 18 SD08
A2 B2 17 SD09
A3 B3 16 SD10
A4 B4 15 SD11
A5 B5 14 SD12
A6 B6 13 SD13
A7 B7 12 SD14
A8 B8 11 SD15

U850
74ALS245
A1 B1 18 SD16
A2 B2 17 SD17
A3 B3 16 SD18
A4 B4 15 SD19
A5 B5 14 SD20
A6 B6 13 SD21
A7 B7 12 SD22
A8 B8 11 SD23

U840
74ALS245
A1 B1 18 SD24
A2 B2 17 SD25
A3 B3 16 SD26
A4 B4 15 SD27
A5 B5 14 SD28
A6 B6 13 SD29
A7 B7 12 SD30
A8 B8 11 SD31

DATA
BUFFERS

CONTROL

ADDRESS
BUFFERS

ACQUISITION
BOARD
INTERFACE

GENLOCK BOARD
INTERFACE

EXTERNAL BUS
BUFFERS

FILTER
BOARD
INTERFACE

J271
DATA
ACQUISITION
BOARD

J694
GENLOCK
BOARD

J795
FILTER
BOARD

671-0534-00 6 UP
P/O AB - CONTROLLER BOARD

CONTROLLER BOARD Schematic <45> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A8 *Partial A8 also shown on Schematics 41, 42, 43, 44, and 46.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
R760A	B2
R760B	B3
R760C	B3
R760D	B2
R760E	B2
R765A	B1
R765B	B2
R765C	B2
R765D	B2
R770A	B2
R770B	B3
R770C	B3
R775A	B1
R775B	B2
R775C	B2
R775D	B2
U530	G5
U670	G3
U680	G4
U740	E4
U745	E3
U750	E2
U752	D4
U755	E2
U758	D3
U760	D2
U765	D2
U770	B4
U775	B3
U840	G2
U850	G2
U868E	B4
U868F	G3

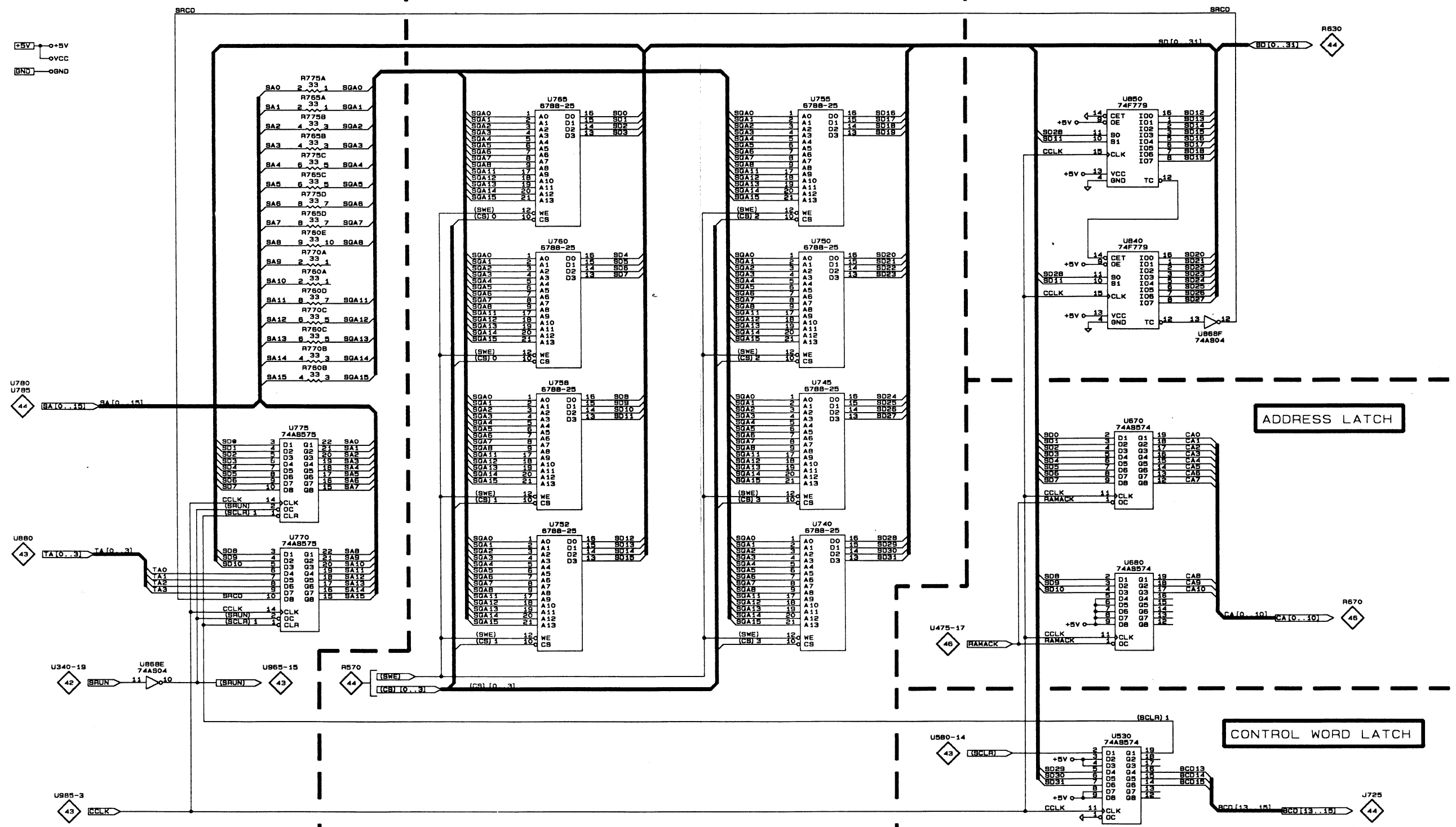
A B C D E F G H

ADDRESS REGISTER

STATIC RAM

16 BIT COUNTER

+5V
-OVCC
-GND

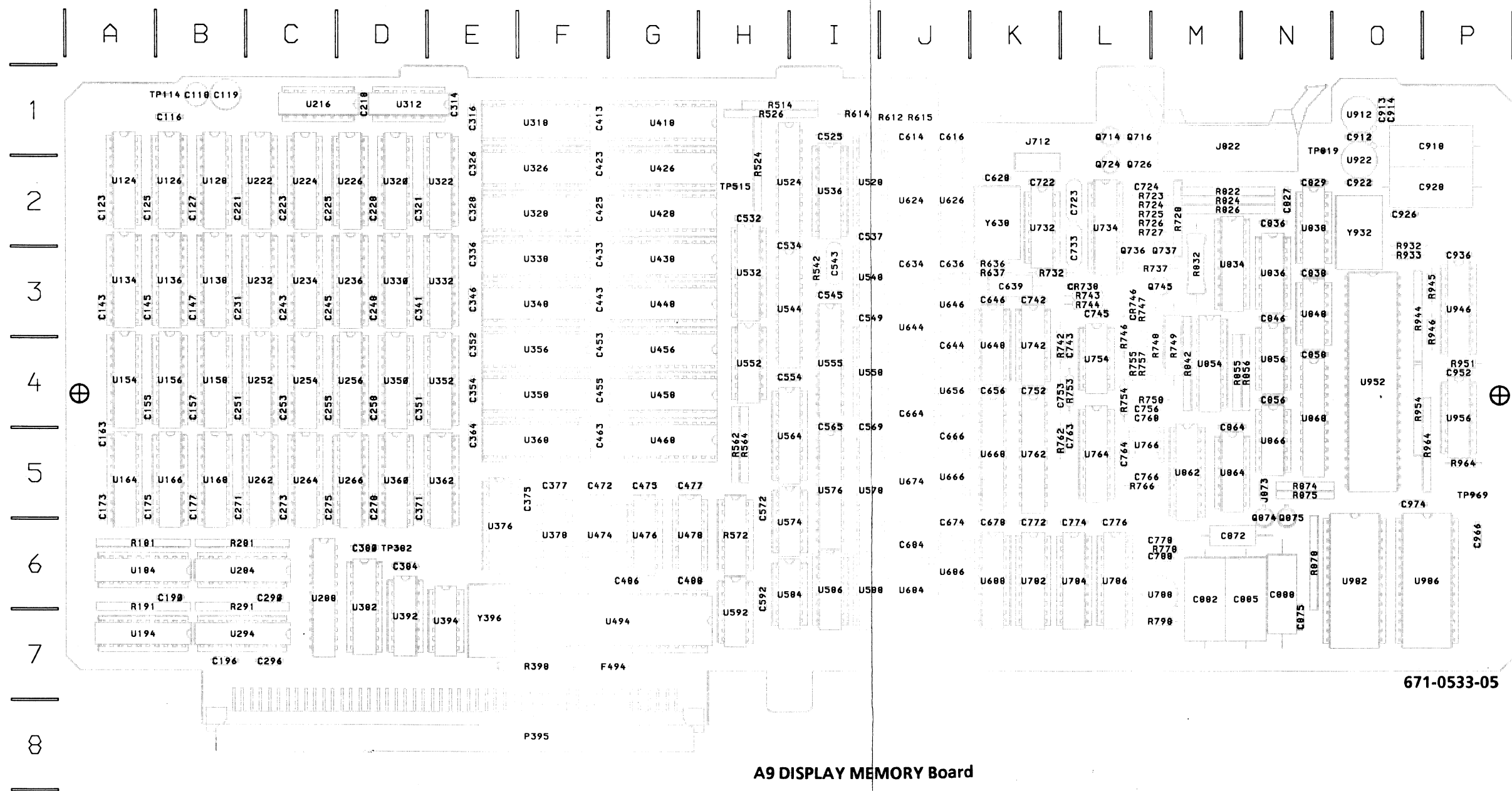


CONTROLLER BOARD
 Schematic <46> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A8 Partial A8 also shown on Schematics 41, 42, 43, 44, and 45.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C110	A5	C770	B5
C115	A5	C775	C5
C140	A5	C780	C5
C145	A5	C785	C5
C150	B5	C788	C5
C152	B5	C789	H5
C154	B5	C830	C5
C166	B5	C840	H5
C170	C5	C842	D5
C180	C5	C844	H5
C230	C5	C846	D5
C235	C5	C850	D5
C240	C5	C855	H5
C250	D5	C860	D5
C259	D5	C864	E5
C260	D5	C868	E5
C262	D5	C870	E5
C280	E5	C885	E5
C285	E5	C888	F5
C330	E5	C940	H5
C340	E5	C944	H5
C356	F5	C946	F5
C360	F5	C955	H5
C364	F5	C958	H5
C380	F5	C960	F5
C385	F5	C965	F5
C430	G5	C980	F5
C440	G5	C982	G5
C450	G5	C985	G5
C452	A5		
C460	A5	J325	H1
C470	A5		
C530	A5	R530	E3
C535	B5	R540	E2
C540	B5	R550	E2
C542	B5	R552	E1
C550	B5	R580	B2
C552	C5	R670A	B1
C554	C5	R670B	B2
C556	C5	R670C	B1
C560	C5	R670D	B1
C562	C5	R670E	B2
C570	D5	R675A	B1
C572	D5	R675B	B2
C580	D5	R675C	B1
C582	D5	R675D	B1
C586	E5	R675E	B2
C630	E5		
C640	E5	U430	F3
C650	E5	U440	F2
C652	F5	U445	C3
C660	F5	U450	F3
C670	F5	U452	F1
C680	F5	U455	C3
C688	F5	U458	C2
C730	G5	U460	F1
C735	G5	U465	C1
C740	G5	U475	B4
C745	A5	U540	E3
C750	A5	U550	E2
C752	A5	U552	E2
C755	A5	U560	E1
C758	B5	U688	B2
C760	B5	U788	B3
C765	B5		



DISPLAY MEMORY BOARD Schematic <47> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on
Schematics 48, 49, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C116	H1	R281	F5
C118	H1	R291	F4
C119	G1		
C778	H1	TP114	G2
C788	G1	TP382	G2
C872	H1	TP515	H2
C875	H1	TP819	H2
C882	G1	TP898	H2
C885	G1		
C888	G1		
F494	E1	U184	G4
P395A	A1	U194	G3
P395B	C1	U284	G5
P395C	D1	U288	B3
		U294	G4
		U382	B4
		U564A	F2
R181	F4	U788	G1
R191	F3		

DISPLAY MEMORY BOARD
Schematic <48> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 49, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
R572	G1	U576	D2
		U578	D1
U376	F4	U586	E2
U378	F3	U588	E2
U474	F2	U646C	C4
U476	F2	U646E	F4
U478	F1	U674	C5
U548A	B2	U684	E1
U548B	B2	U686A	C4
U555	B3	U686B	C4
U558	D4		

DISPLAY MEMORY BOARD
Schematic <49> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C543	E3
R398A	B5
R398B	E4
R398C	B4
R398D	B4
R514	F1
R524	G2
R526	G2
R542	F3
R562	G3
R564	G2
U392	B4
U394A	C4
U394B	C4
U494	C3
U524	F2
U532	F2
U544	F2
U552A	C2
U552B	D2
U564B	G4
U574A	B4
U574B	D4
U574C	A5
U584A	E4
U584B	F4
U592A	D4
U592B	F4
U646A	G4
U646B	C3
Y396	A5

DISPLAY MEMORY BOARD

Schematic <50> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 51, 52, 53, and 54.

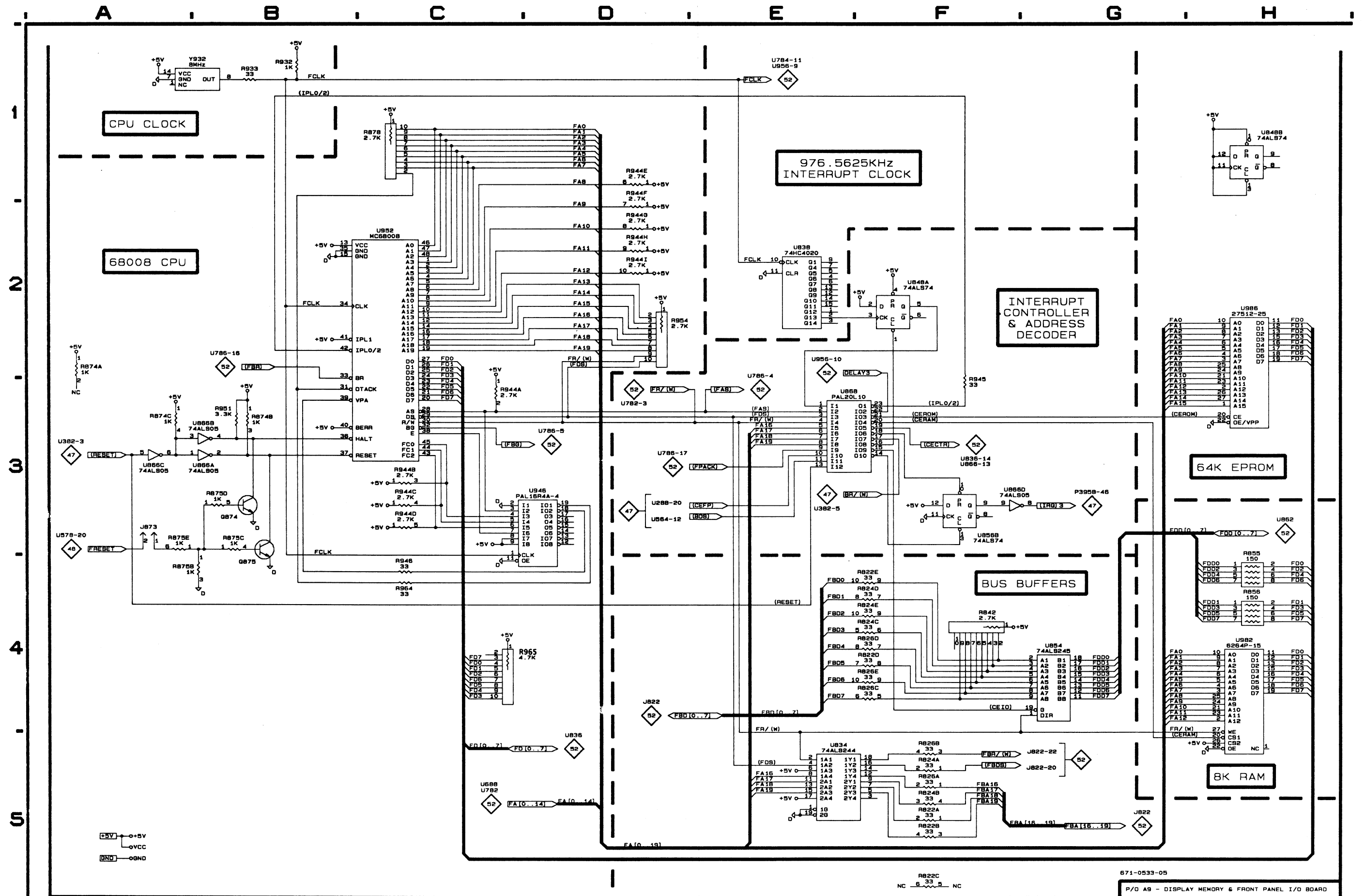
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C639	G4	R748	F3
C723	G5	R749	F3
C733	F5	R753	E3
C753	D4	R754	E3
C768	D4	R755	F4
		R757	F3
CR738	F3	R758	D4
CR746	F3	R762	D4
		R766	D4
J712	H4	R832	F4
Q714	G4	U216	D4
Q716	G4	U312	D5
Q724	G4	U528	C1
Q726	F4	U536	C1
Q736	H4	U574D	A1
Q737	F3	U624	A3
Q745	F3	U626	A2
		U644	A3
R612	G4	U646D	F2
R614	H4	U646F	B2
R615	F5	U648	E2
R636	E2	U656A	A1
R637	B1	U656B	C1
R723	G4	U666A	E1
R724	F4	U666B	G2
R725	G4	U668	F1
R726	G4	U732A	F5
R727	H4	U732B	F5
R728A	G4	U734	E4
R728B	F4	U742A	G5
R728C	G3	U742B	D4
R728D	G3	U754A	F3
R728E	H4	U754B	F3
R728F	H3	U754C	E3
R728G	H3	U754D	E3
R732	G5	U762	F1
R737	G4	U764	C3
R742	F3	U766	D4
R743	F3		
R744	F3	Y638	A1
R747	H4		

DISPLAY MEMORY BOARD
Schematic <51> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
J873	A3
Q874	B3
Q875	B3
R822A	F5
R822B	F5
R822C	F5
R822D	F4
R822E	F4
R824A	F5
R824B	F5
R824C	F4
R824D	F4
R824E	F4
R826A	F5
R826B	F5
R826C	F4
R826D	F4
R826E	F4
R842	F4
R855	H4
R856	H4
R874A	A2
R874B	B3
R874C	A3
R875B	B4
R875C	B3
R875D	B3
R875E	A3
R878	C1
R932	B1
R933	B1
R944A	C3
R944B	C3
R944C	C3
R944D	C3
R944E	D1
R944F	D2
R944G	D2
R944H	D2
R944I	D2
R945	F2
R946	C4
R951	B3
R954	D2
R964	C4
R965	C4
U834	E5
U838	E2
U848A	F2
U848B	H1
U854	G4
U856B	F3
U866A	B3
U866B	B3
U866C	A3
U866D	F3
U868	E3
U946	C3
U952	B2
U982	H4
U986	H2
Y932	A1



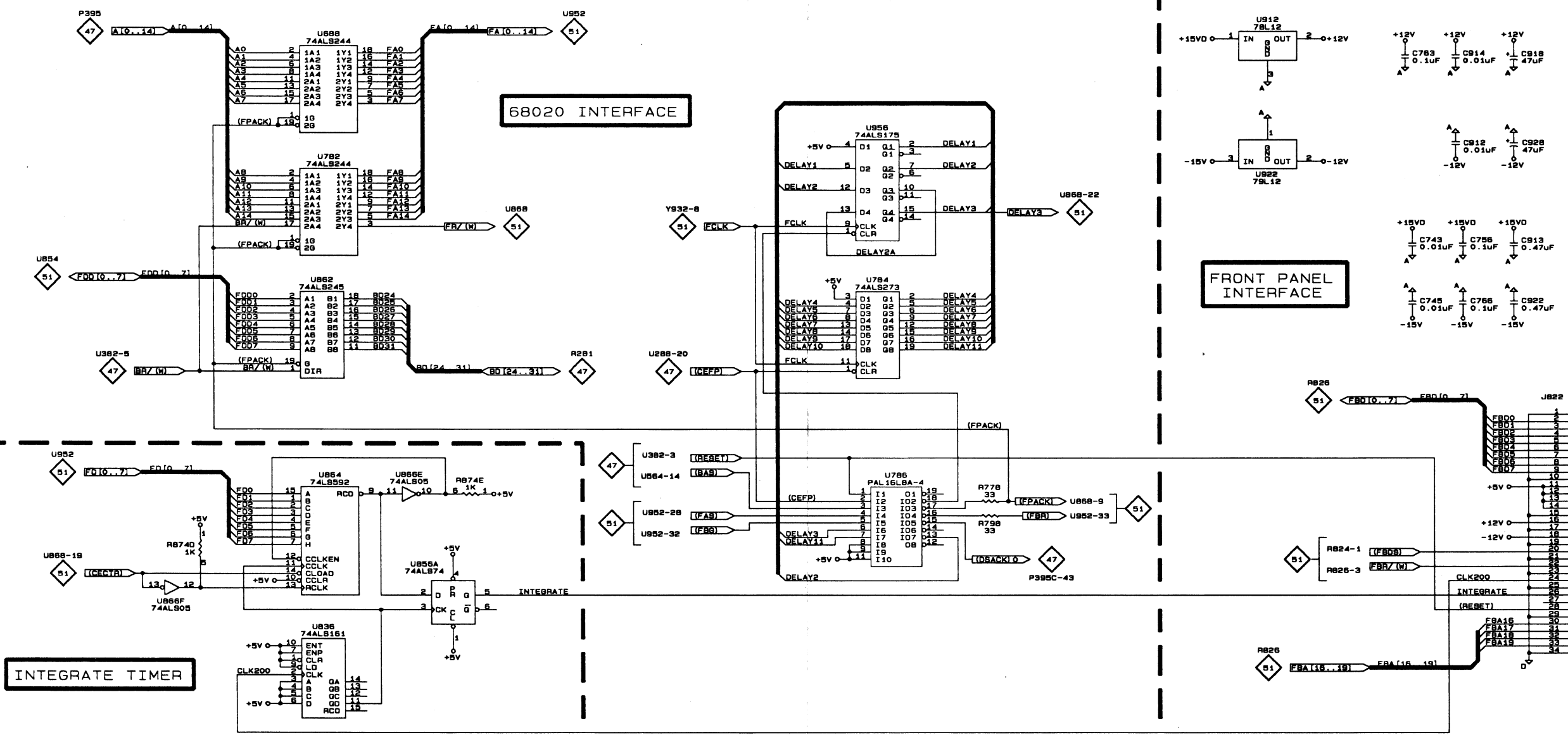
DISPLAY MEMORY BOARD
Schematic <52> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

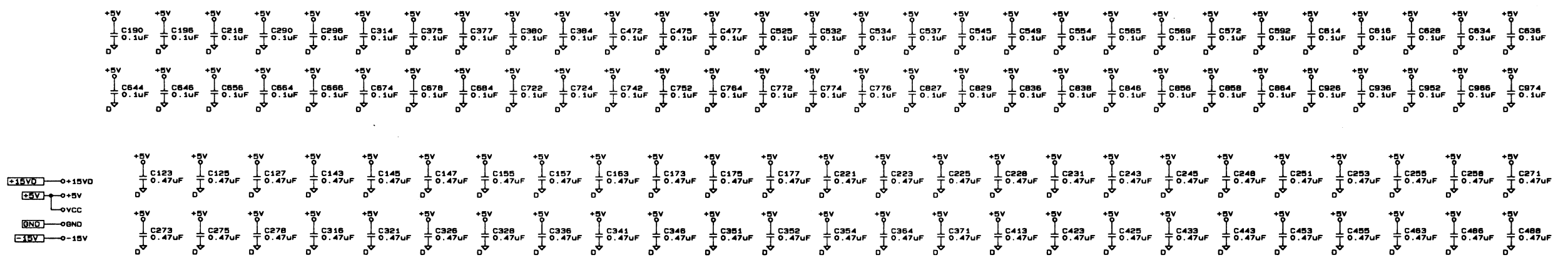
ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C123	A5	C433	F5	C846	F4
C125	B5	C443	F5	C856	F4
C127	B5	C453	G5	C858	F4
C143	B5	C455	G5	C864	G4
C145	B5	C463	G5	C912	H1
C147	C5	C472	D4	C913	H2
C155	C5	C475	D4	C914	H1
C157	C5	C477	D4	C918	H1
C163	C5	C486	G5	C922	H2
C173	D5	C488	H5	C926	G4
C175	D5	C525	D4	C928	H1
C177	D5	C532	D4	C936	G4
C190	A4	C534	E4	C952	G4
C196	A4	C537	E4	C966	H4
C218	B4	C545	E4	C974	H4
C221	E5	C549	E4		
C223	E5	C554	F4	J822	H2
C225	E5	C565	F4		
C228	E5	C569	F4	R778	E3
C231	F5	C572	F4	R798	E3
C243	F5	C592	G4	R874D	B3
C245	F5	C614	G4	R874E	C3
C248	F5	C616	G4		
C251	G5	C628	G4	U688	B1
C253	G5	C634	H4	U782	B1
C255	G5	C636	H4	U784	E2
C258	G5	C644	A4	U786	E3
C271	H5	C646	A4	U836	B3
C273	A5	C656	B4	U856A	C3
C275	B5	C664	B4	U862	B2
C278	B5	C666	B4	U864	B3
C290	B4	C674	B4	U866E	C3
C296	B4	C678	C4	U866F	B3
C314	B4	C684	C4	U912	G1
C316	B5	C722	C4	U922	G1
C321	B5	C724	C4	U956	E1
C326	C5	C742	D4		
C328	C5	C743	G2		
C336	C5	C745	G2		
C341	C5	C752	D4		
C346	D5	C756	H2		
C351	D5	C763	G1		
C352	D5	C764	D4		
C354	E5	C766	H2		
C364	E5	C772	D4		
C371	E5	C774	D4		
C375	C4	C776	E4		
C377	C4	C827	E4		
C380	C4	C829	E4		
C384	C4	C836	E4		
C413	E5	C838	F4		
C423	F5				
C425	F5				

A B C D E F G H



DECOUPLING CAPS



DISPLAY MEMORY BOARD
Schematic <53> Look-Up Chart

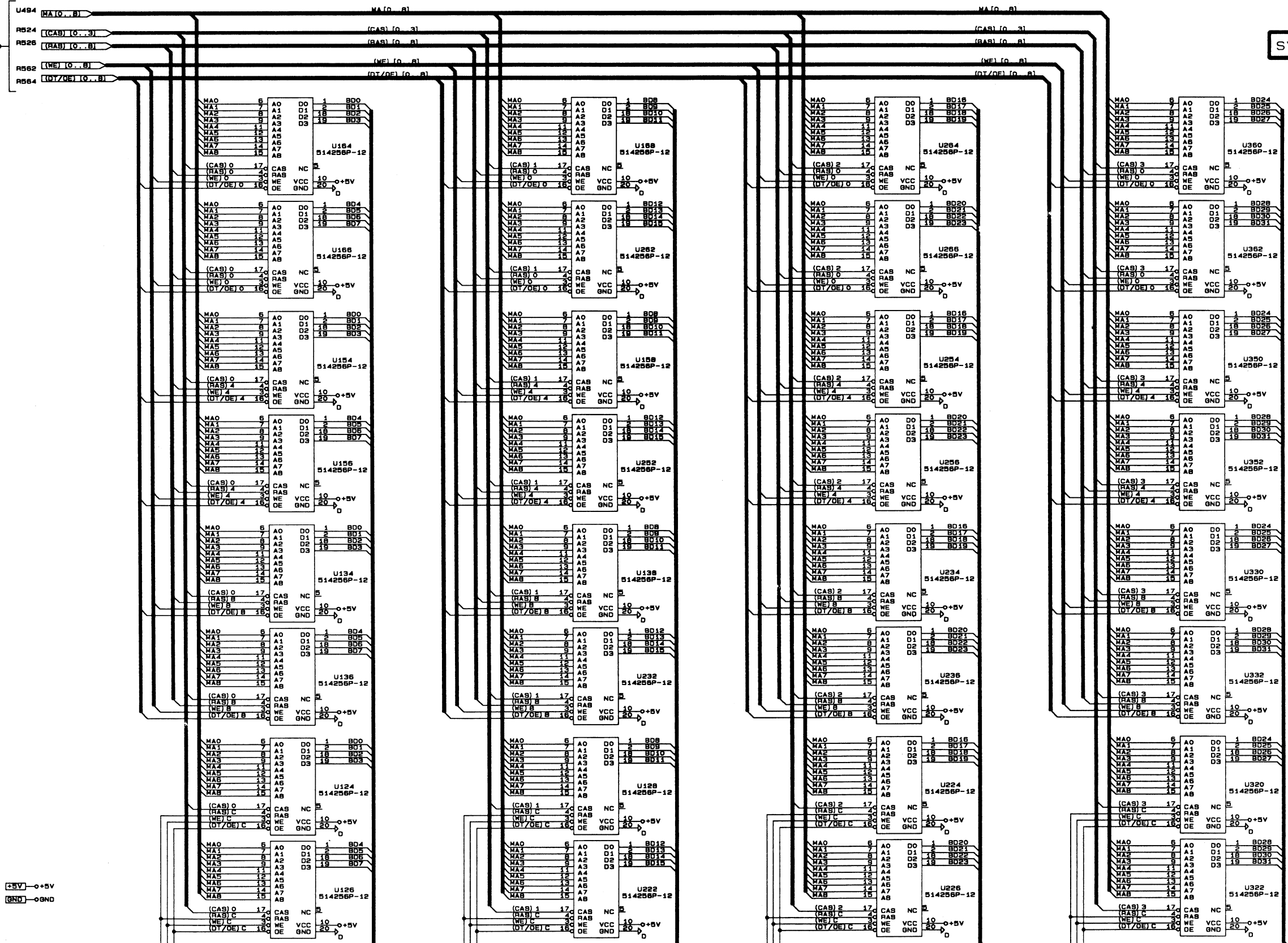
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 *Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 52, and 54.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
U124	B4
U126	B5
U128	D4
U134	B3
U136	B4
U138	D3
U154	B2
U156	B3
U158	D2
U164	B1
U166	B2
U168	D1
U222	D5
U224	E4
U226	E5
U232	D4
U234	E3
U236	E4
U252	D3
U254	E2
U256	E3
U262	D2
U264	E1
U266	E2
U320	G4
U322	G5
U330	G3
U332	G4
U350	G2
U352	G3
U360	G1
U362	G2

A B C D E F G H

SYSTEM RAM



671-0533-05

P/O A9 - DISPLAY MEMORY & FRONT PANEL I/O BOARD

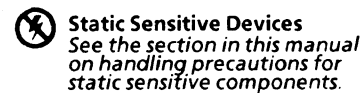
DISPLAY MEMORY BOARD Schematic <54> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 52, and 53.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U318	B2
U326	B2
U328	D2
U338	D2
U348	F2
U356	F2
U358	G2
U368	G2
U418	B4
U426	B4
U428	D4
U438	D4
U448	F4
U456	F4
U458	G4
U468	G4





DISPLAY MEMORY BOARD

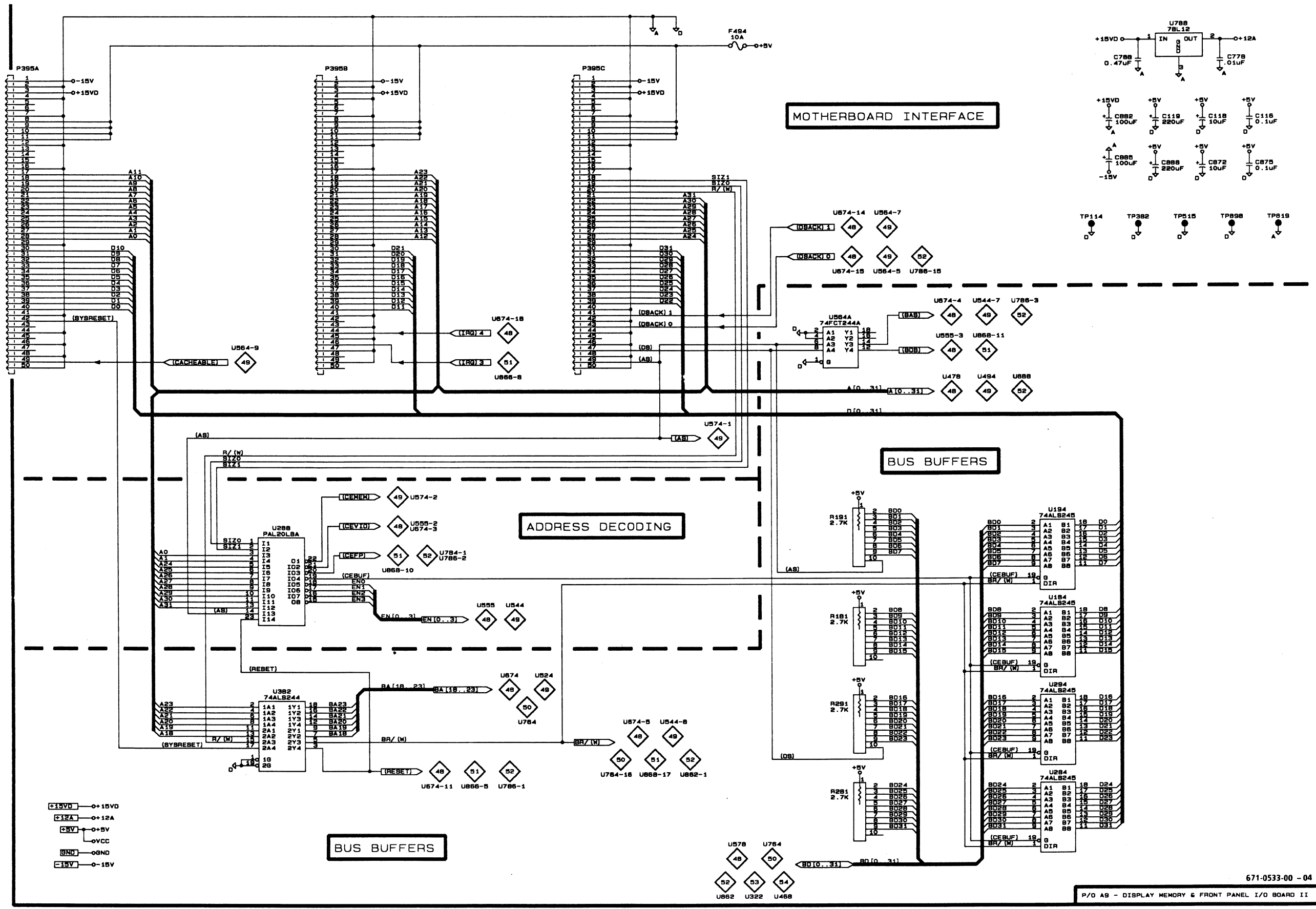
The schematic diagram has an alphanumeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 48, 49, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C116	H1	R191	F3
C118	H1	R281	F5
C119	G1	R291	F4
C778	H1		
C788	G1	TP114	G2
C872	H1	TP382	G2
C875	H1	TP515	H2
C882	G1	TP819	H2
C885	G1	TP969	H2
C888	G1		
		U184	G4
F494	E1	U194	G3
		U284	G5
P395A	A1	U288	B3
P395B	C1	U294	G4
P395C	D1	U382	B4
		U564A	F2
R181	F4	U788	H1

A B C D E F G H

J240
MAIN
INTERFACE
RIGHT
BOARD



DISPLAY MEMORY BOARD

Schematic <48> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 49, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
R572	G1	U576	D2
U376	F4	U578	D1
U378	F3	U586	E2
U474	F2	U588	E2
U476	F2	U646C	C4
U478	F1	U646E	F4
U548A	B2	U674	C5
U548B	B2	U684	E1
U555	B3	U686A	C4
U558	D4	U686B	C4

A B C D E F G H

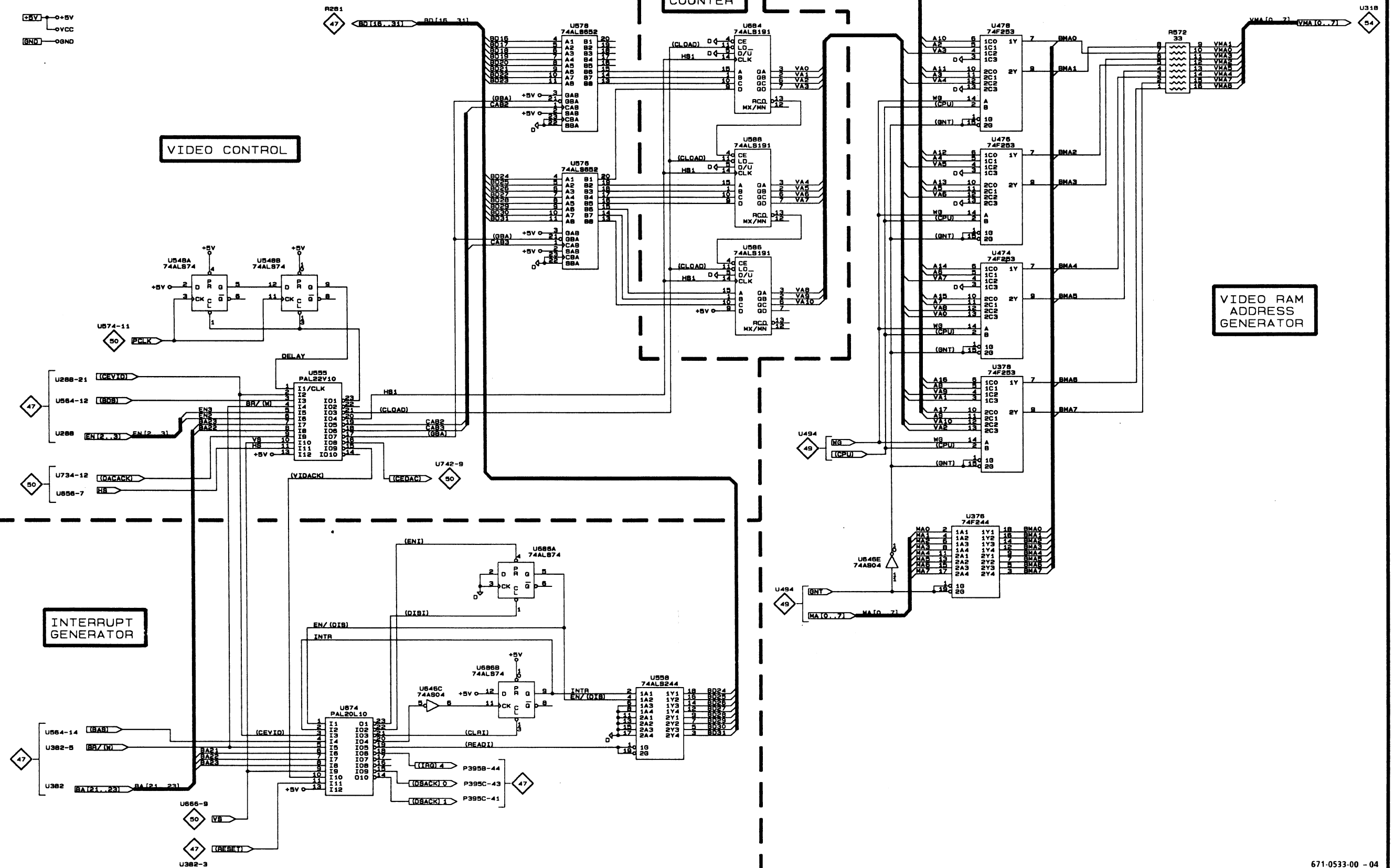
+5V
0VCC
GND 0GND

VIDEO CONTROL

VIDEO
ADDRESS
COUNTER

VIDEO RAM
ADDRESS
GENERATOR

INTERRUPT
GENERATOR



671-0533-00 - 04

P/O A9 - DISPLAY MEMORY & FRONT PANEL I/O BOARD II

DISPLAY MEMORY BOARD Schematic <49> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 50, 51, 52, 53, and 54.

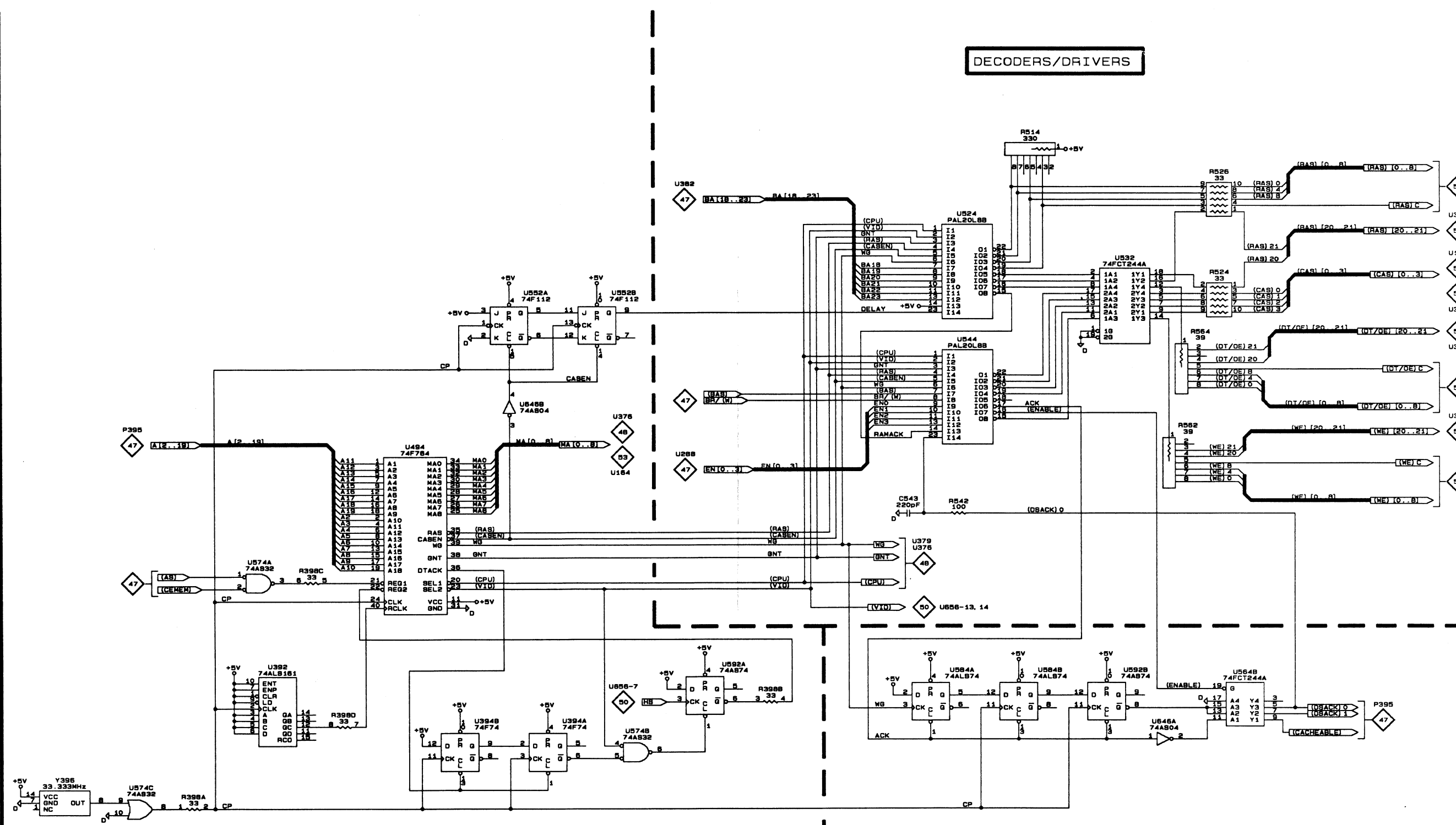
CIRCUIT NUMBER	SCHEMATIC LOCATION
C543	E3
R398A	B5
R398B	E4
R398C	B4
R398D	B4
R514	F1
R524	G2
R526	G2
R542	F3
R562	G3
R564	G2
U392	B4
U394A	C4
U394B	C4
U494	C3
U524	F2
U532	F2
U544	F2
U552A	C2
U552B	D2
U564B	G4
U574A	B4
U574B	D4
U574C	A5
U584A	E4
U584B	F4
U592A	D4
U592B	F4
U646A	G4
U646B	C3
Y396	A5

A B C D E F G H

DECODERS/DRIVERS

TIMING/ARBITRATION LOGIC

DSACK GENERATOR



DISPLAY MEMORY BOARD
Schematic <50> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C639	G4	R755	F4
C723	G5	R756	F3
C733	F5	R757	F3
C753	D4	R758	D4
C768	D4	R762	D4
		R766	D4
J712	H4	R832	F4
Q714	G4	U216	D4
Q716	G4	U312	D5
Q724	G4	U528	C1
Q726	F4	U536	C1
Q736	H4	U574D	A1
Q737	F3	U624	A3
Q745	F3	U626	A2
		U644	A3
R612	G4	U646D	F2
R614	H4	U646F	B2
R636	E2	U648	E2
R637	B1	U656A	A1
R723	G4	U656B	C1
R724	F4	U666A	E1
R725	G4	U666B	G2
R726	G4	U668	F1
R727	H4	U732A	F5
R728A	G4	U732B	F5
R728B	F4	U734	E4
R728C	G3	U742A	G5
R728D	G3	U742B	D4
R728E	H4	U744A	F3
R728F	H3	U744B	F3
R728G	H3	U754A	F3
R732	G5	U754B	F3
R737	G4	U754C	E3
R742	F3	U754D	E3
R745	F3	U762	F1
R746	F3	U764	C3
R747	H4	U766	D4
R748	G3		
R749	F3	Y638	A1
R753	E3		
R754	E3		

DISPLAY MEMORY BOARD

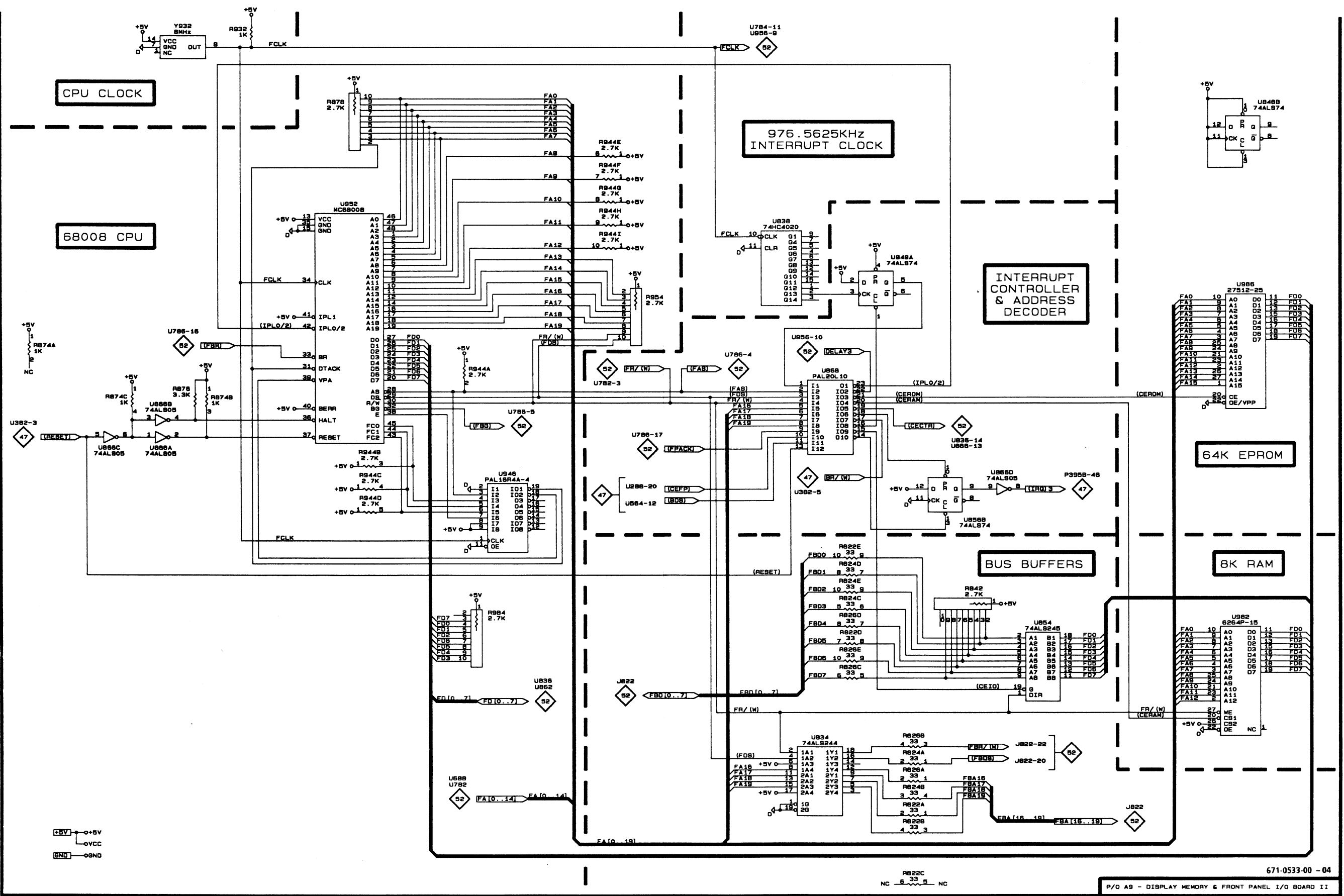
Schematic <51> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R822A	F5
R822B	F5
R822C	F5
R822D	F4
R822E	F4
R824A	F5
R824B	F5
R824C	F4
R824D	F4
R824E	F4
R826A	F5
R826B	F5
R826C	F4
R826D	F4
R826E	F4
R842	F4
R874A	A2
R874B	B3
R874C	A3
R876	B3
R878	C1
R932	B1
R944A	C3
R944B	C3
R944C	C3
R944D	C3
R944E	D1
R944F	D2
R944G	D2
R944H	D2
R944I	D2
R954	D2
R984	C4
U834	E5
U838	E2
U848A	F2
U848B	H1
U854	G4
U856B	F3
U866A	B3
U866B	B3
U866C	A3
U866D	F3
U868	E3
U946	C3
U952	B2
U982	H4
U986	H2
Y932	B1

A B C D E F G H



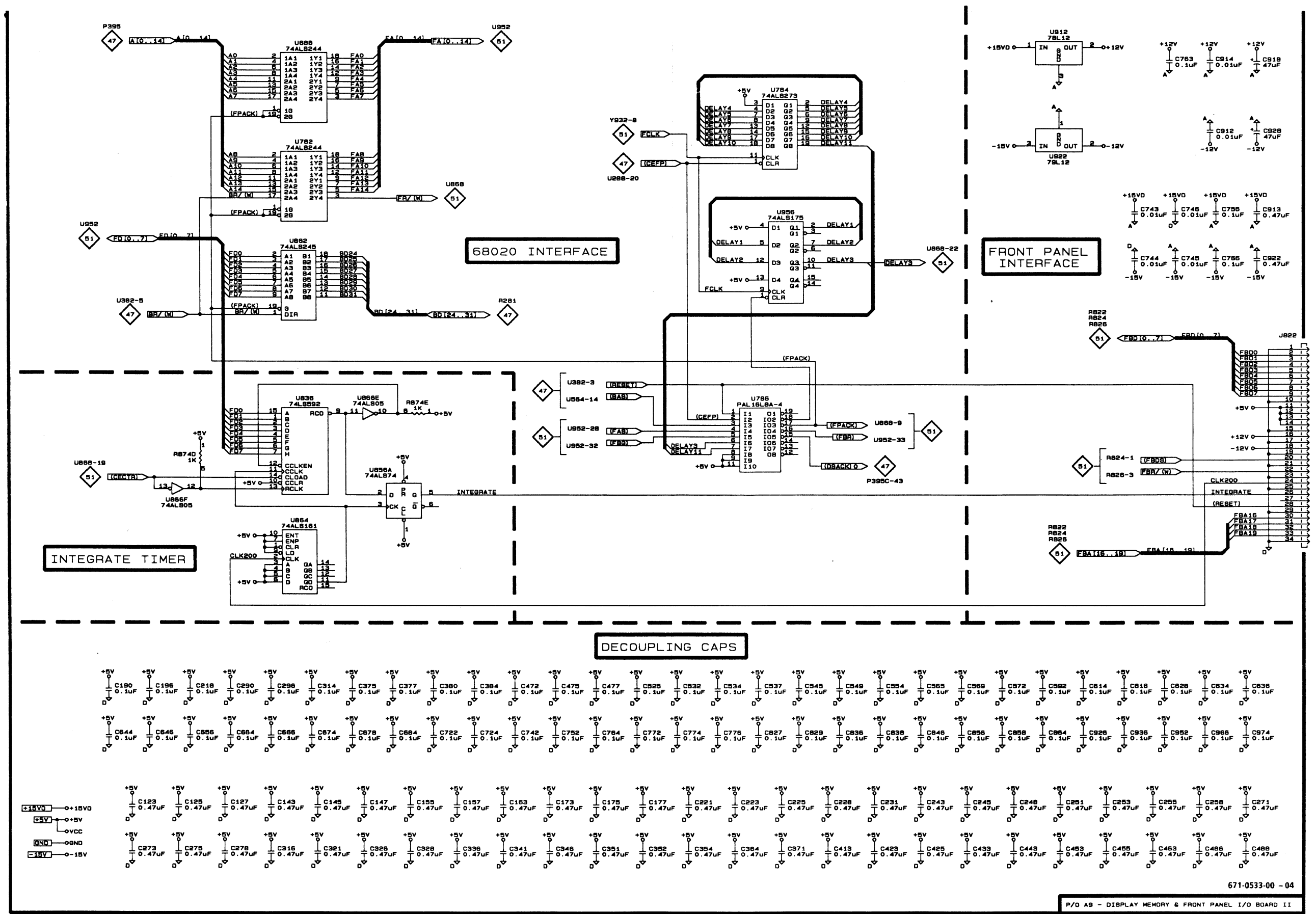
DISPLAY MEMORY BOARD
 Schematic <52> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C123	A5	C433	F5	C846	F4
C125	B5	C443	F5	C856	F4
C127	B5	C453	G5	C858	F4
C143	B5	C455	G5	C864	G4
C145	B5	C463	G5	C912	H1
C147	C5	C472	D4	C913	H2
C155	C5	C475	D4	C914	H1
C157	C5	C477	D4	C918	H1
C163	C5	C486	G5	C922	H2
C173	D5	C488	H5	C926	G4
C175	D5	C525	D4	C928	H1
C177	D5	C532	D4	C936	G4
C190	A4	C534	E4	C952	G4
C196	A4	C537	E4	C966	H4
C218	B4	C545	E4	C974	H4
C221	E5	C549	E4		
C223	E5	C554	F4	J822	H2
C225	E5	C565	F4		
C228	E5	C569	F4	R874D	B3
C231	F5	C572	F4	R874E	C3
C243	F5	C592	G4		
C245	F5	C614	G4	U688	B1
C248	F5	C616	G4	U782	B1
C251	G5	C628	G4	U784	E1
C253	G5	C634	H4	U786	E3
C255	G5	C636	H4	U836	B3
C258	G5	C644	A4	U856A	C3
C271	H5	C646	A4	U862	B2
C273	A5	C656	B4	U864	B3
C275	B5	C664	B4	U866E	C3
C278	B5	C666	B4	U866F	B3
C290	B4	C674	B4	U912	G1
C296	B4	C678	C4	U922	G1
C314	B4	C684	C4	U956	E2
C316	B5	C722	C4		
C321	B5	C724	C4		
C326	C5	C742	D4		
C328	C5	C743	G2		
C336	C5	C744	G2		
C341	C5	C745	G2		
C346	D5	C746	G2		
C351	D5	C752	D4		
C352	D5	C756	H2		
C354	E5	C763	G1		
C364	E5	C764	D4		
C371	E5	C766	H2		
C375	C4	C772	D4		
C377	C4	C774	D4		
C380	C4	C776	E4		
C384	C4	C827	E4		
C413	E5	C829	E4		
C423	F5	C836	E4		
C425	F5	C838	F4		

A B C D E F G H



DISPLAY MEMORY BOARD

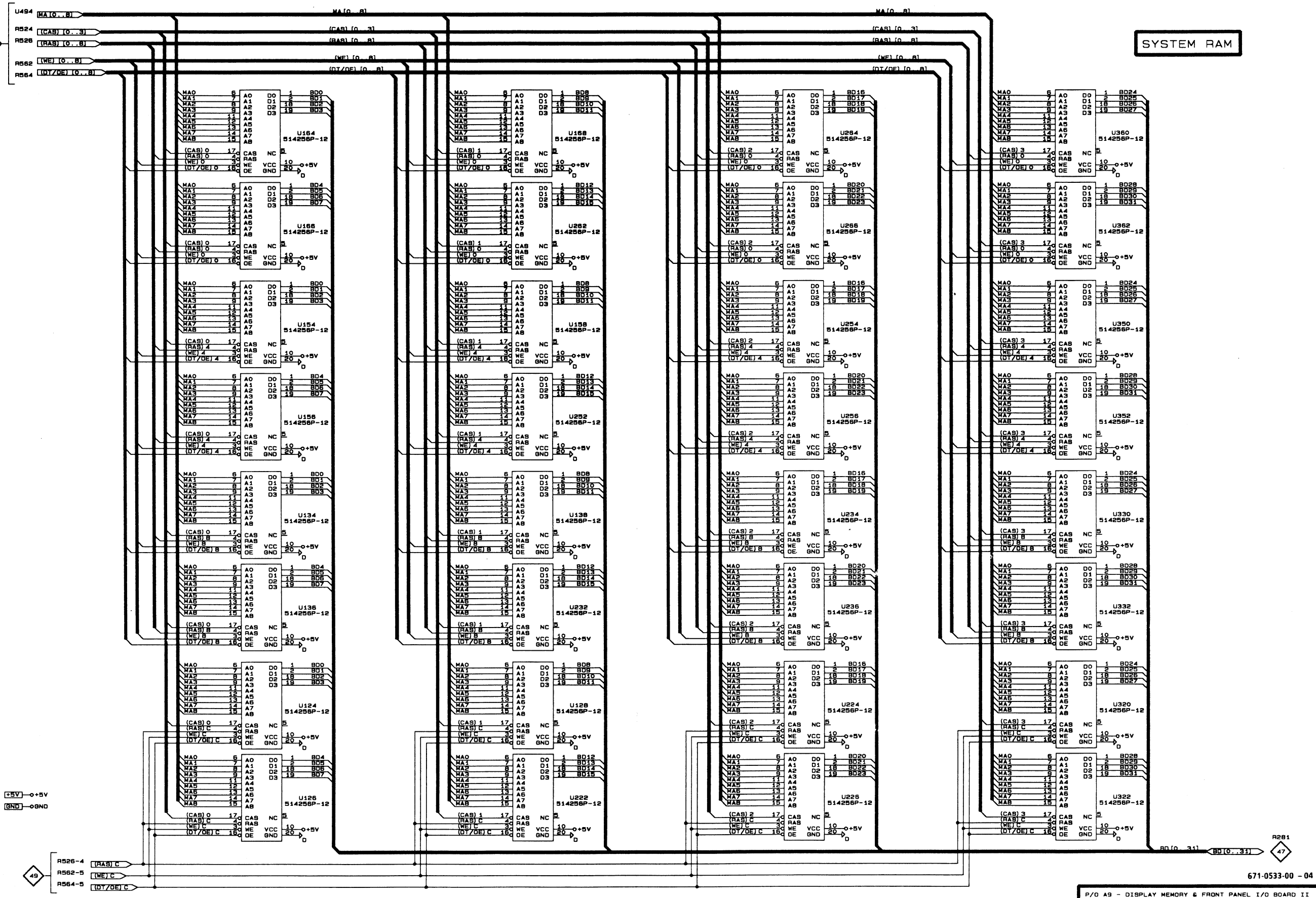
Schematic <53> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 *Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 52, and 54.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
U124	B4
U126	B5
U128	D4
U134	B3
U136	B4
U138	D3
U154	B2
U156	B3
U158	D2
U164	B1
U166	B2
U168	D1
U222	D5
U224	E4
U226	E5
U232	D4
U234	E3
U236	E4
U252	D3
U254	E2
U256	E3
U262	D2
U264	E1
U266	E2
U320	G4
U322	G5
U330	G3
U332	G4
U350	G2
U352	G3
U360	G1
U362	G2

A B C D E F G H



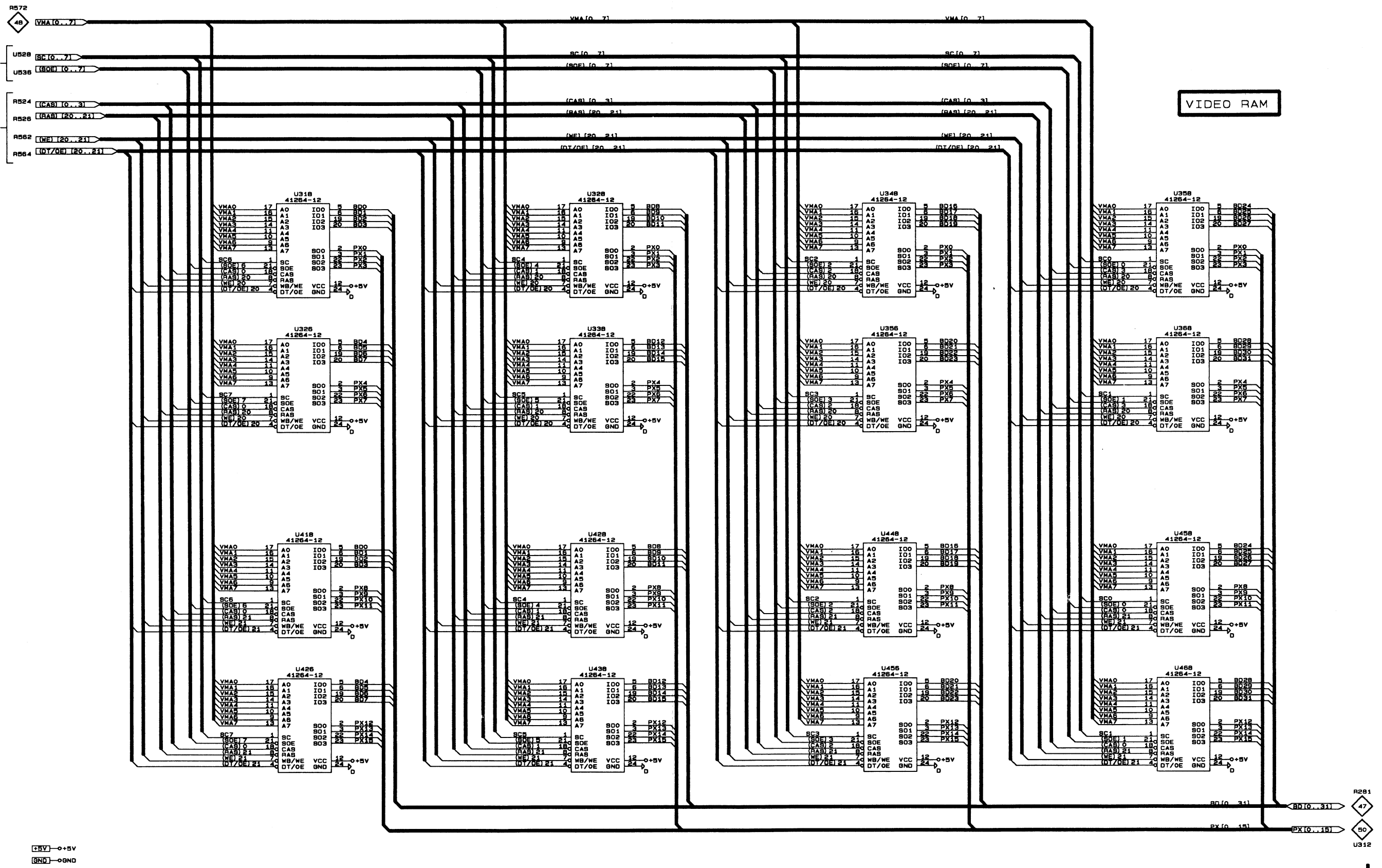
DISPLAY MEMORY BOARD
Schematic <54> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 52, and 53.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U318	B2
U326	B2
U328	D2
U338	D2
U348	F2
U356	F2
U358	G2
U368	G2
U418	B4
U426	B4
U428	D4
U438	D4
U448	F4
U456	F4
U458	G4
U468	G4

A B C D E F G H



VM700

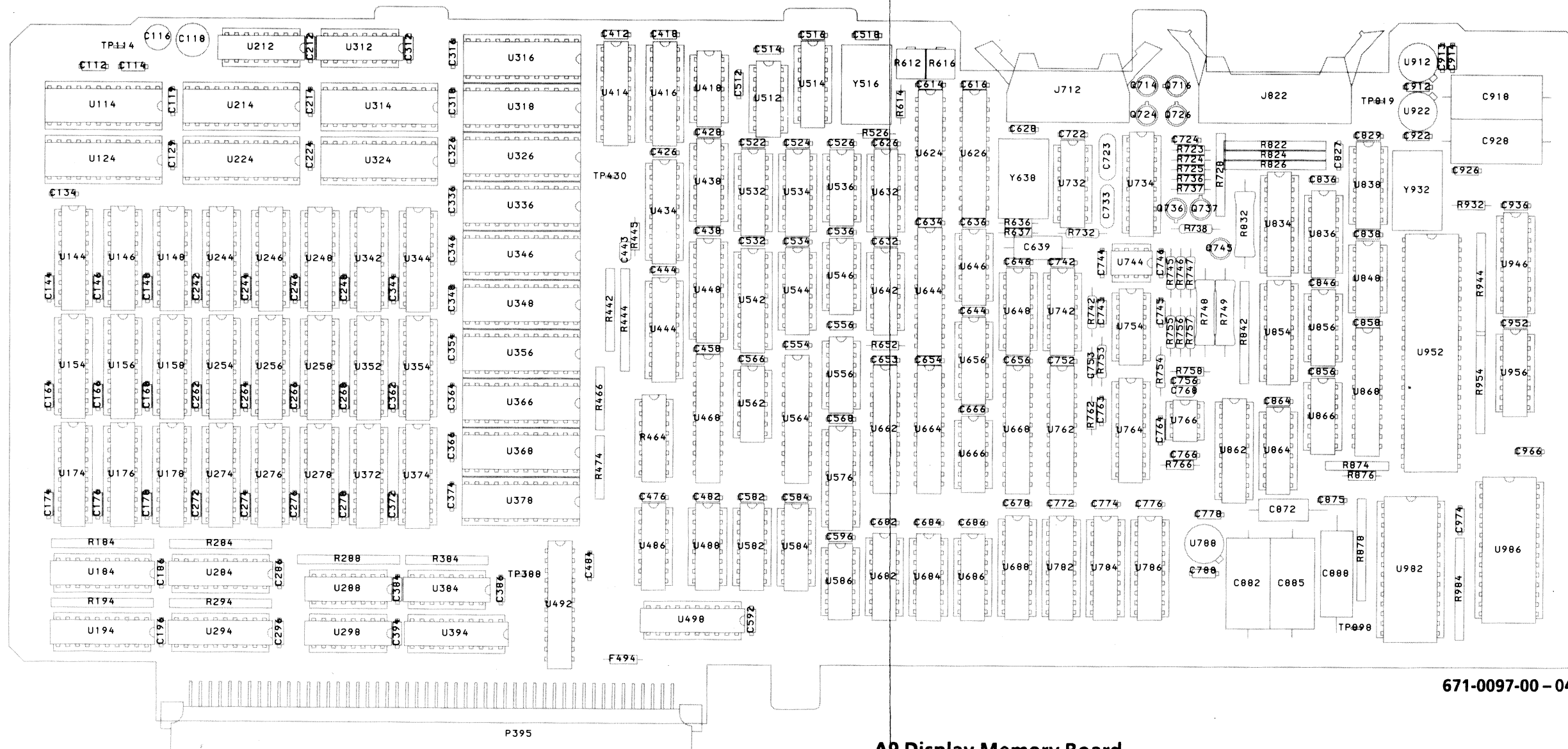
512K DISPLAY MEMORY

SN 8020670 - 8021199

54

671-0533-00 - 04

P/O A9 - DISPLAY MEMORY & FRONT PANEL I/O BOARD II



671-0097-00 - 04

 **Static Sensitive Devices**
See the section in this manual
on handling precautions for
static sensitive components.

A9 Display Memory Board

DISPLAY MEMORY BOARD Schematic <47> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on
Schematics 48, 49, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C112	H1	P395B	C1	U184	G4
C116	G1	P395C	D1	U194	G3
C118	G1			U284	G5
C778	G1	R184	F4	U294	G4
C788	G1	R194	F3	U394	B4
C872	G2	R284	F5	U492	B3
C875	H2	R294	F4	U498	B5
C882	G1			U788	G1
C885	G1	TP114	G2		
C888	G2	TP388	G2		
		TP430	G2		
F494	E1	TP819	H2		
P395A	A1	TP898	G2		

DISPLAY MEMORY BOARD
Schematic <48> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 49, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R288A	G4
R288B	G4
R288C	G4
R288D	G4
R288E	G4
R384A	G5
R384B	G5
R384C	G5
R384D	G4
R464	G1
U288	G4
U298	G4
U384	G5
U468	C5
U486	F2
U488	F2
U562A	C4
U562B	C4
U564	B3
U576	D4
U582	F3
U584	F1
U586A	B2
U586B	B2
U646C	C4
U662	D2
U664	D2
U682	E2
U684	E2
U686	E3

A B C D E F G H

+5V -> +5V
GND -> 0VCC
GND -> 0GND

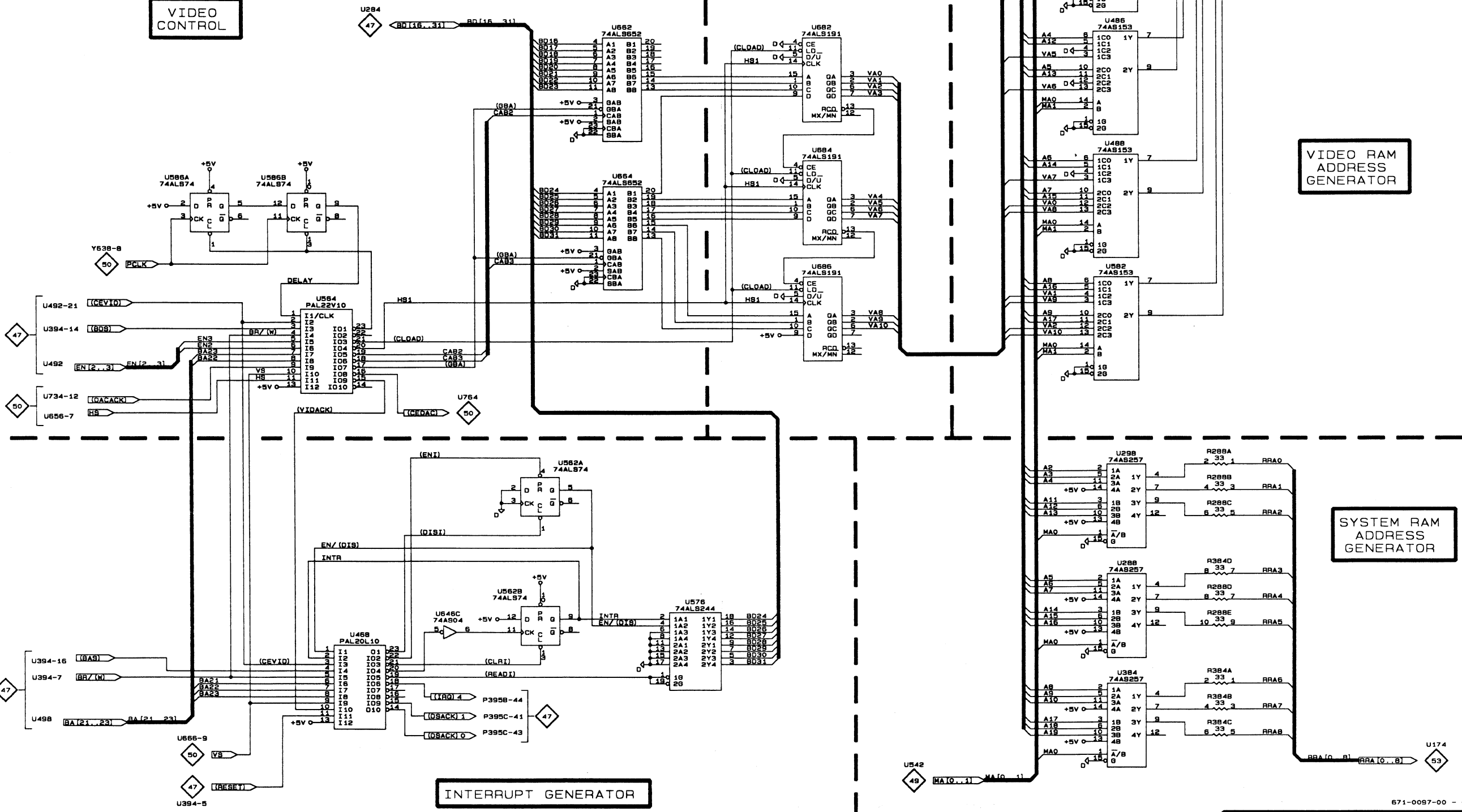
VIDEO CONTROL

VIDEO ADDRESS COUNTER

VIDEO RAM ADDRESS GENERATOR

SYSTEM RAM ADDRESS GENERATOR

INTERRUPT GENERATOR



DISPLAY MEMORY BOARD
Schematic <49> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 50, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C443	F5
R442A	F5
R442B	F5
R442C	F5
R442D	F5
R444A	E3
R444B	E3
R444C	E3
R444D	E3
R444E	E3
R445	F5
R466	G3
R474	G4
R526	B3
R652	A2
U418A	F4
U418B	D1
U434	F4
U438	F1
U444	E5
U448	E3
U512A	E1
U512B	E2
U512C	E1
U514A	C1
U514B	D1
U532	F1
U534A	C1
U534B	D1
U536A	B2
U536B	B2
U542	E4
U544A	C2
U544B	D2
U546A	D2
U546B	D1
U546C	D2
U556A	C1
U556B	A4
U556C	C2
U556D	C1
U632A	A3
U632B	A1
U642	A2
U646A	A4
U646B	F4
U646E	A5
Y516	A3

DISPLAY MEMORY BOARD
Schematic <50> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 51, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C639	G4	R756	F3
C723	G5	R757	F3
C733	F5	R758	D4
C753	D4	R762	D4
C768	D4	R766	D4
		R832	F4
J712	H4		
		U212	D5
Q714	G4	U312	D4
Q716	G4	U414	C1
Q724	G4	U416	C1
Q726	F4	U624	A3
Q736	H4	U626	A2
Q737	F3	U644	A3
Q745	F3	U646D	F2
		U646F	B2
R612	G4	U648	E2
R614	H4	U656A	A1
R616	F5	U656B	C1
R636	E2	U666A	E1
R637	B1	U666B	G2
R723	G4	U668	F1
R724	F4	U732A	F5
R725	G4	U732B	F5
R728A	G4	U734	E4
R728B	F4	U742A	G5
R728C	G3	U742B	D4
R728D	G3	U744A	F3
R728E	H4	U744B	F3
R732	G5	U754A	F3
R736	G4	U754B	F3
R737	H4	U754C	E3
R738	G4	U754D	E3
R742	F3	U762	F1
R745	F3	U764	C3
R746	F3	U766	D4
R747	H4		
R748	G3	Y638	A1
R749	F3		
R753	E3		
R754	E3		
R755	F4		

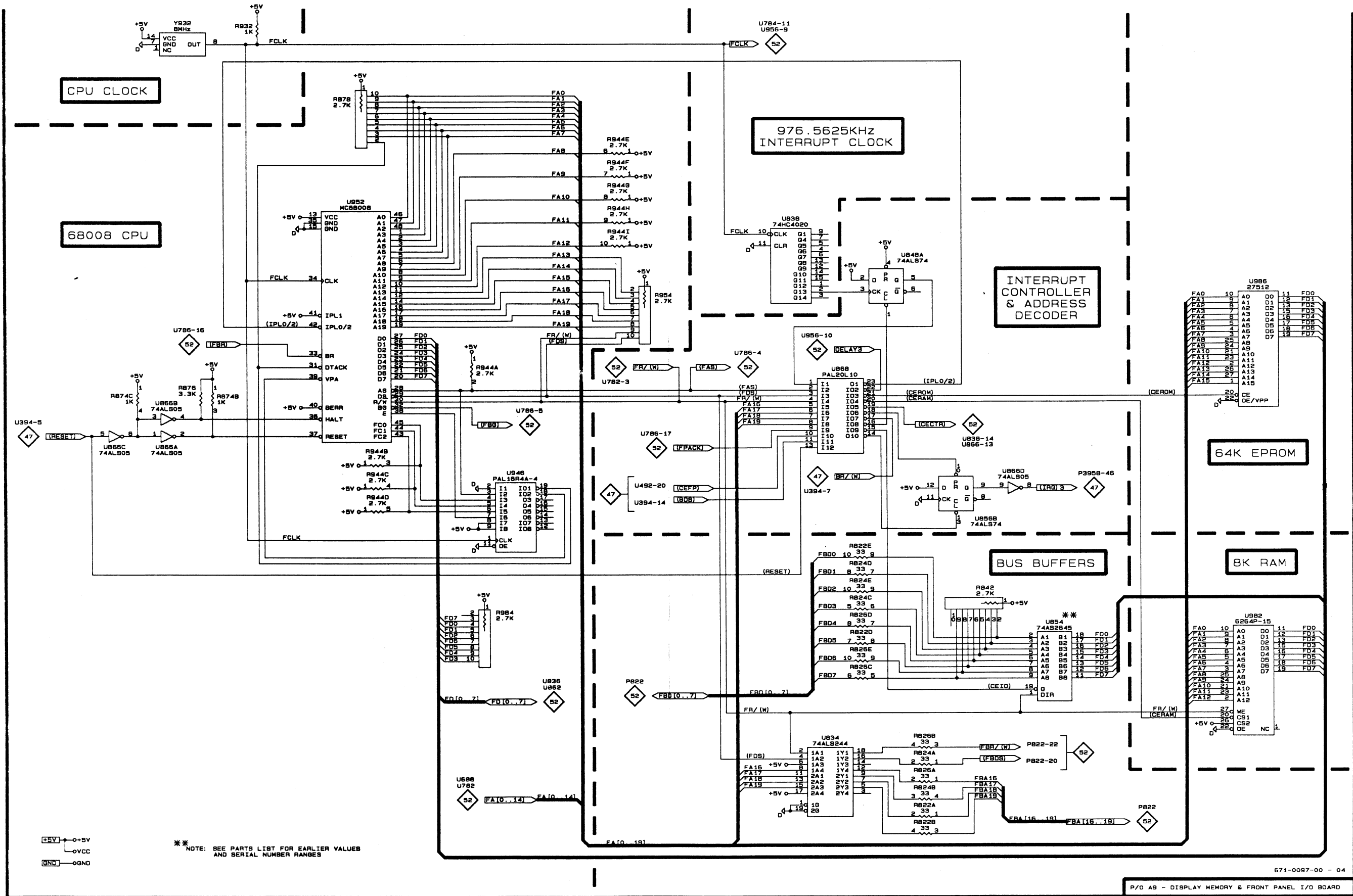
DISPLAY MEMORY BOARD
Schematic <51> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 52, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
R822A	F5
R822B	F5
R822D	F4
R822E	F4
R824A	F5
R824B	F5
R824C	F4
R824D	F4
R824E	F4
R826A	F5
R826B	F5
R826C	F4
R826D	F4
R826E	F4
R842	F4
R874B	B3
R874C	A3
R876	B3
R878	C1
R932	B1
R944A	C3
R944B	C3
R944C	C3
R944D	C3
R944E	D1
R944F	D2
R944G	D2
R944H	D2
R944I	D2
R954	D2
R984	C4
U834	E5
U838	E2
U848A	F2
U854	G4
U856B	F3
U866A	B3
U866B	B3
U866C	A3
U866D	F3
U868	E3
U946	C3
U952	B2
U982	H4
U986	H2
Y932	B1

A B C D E F G H



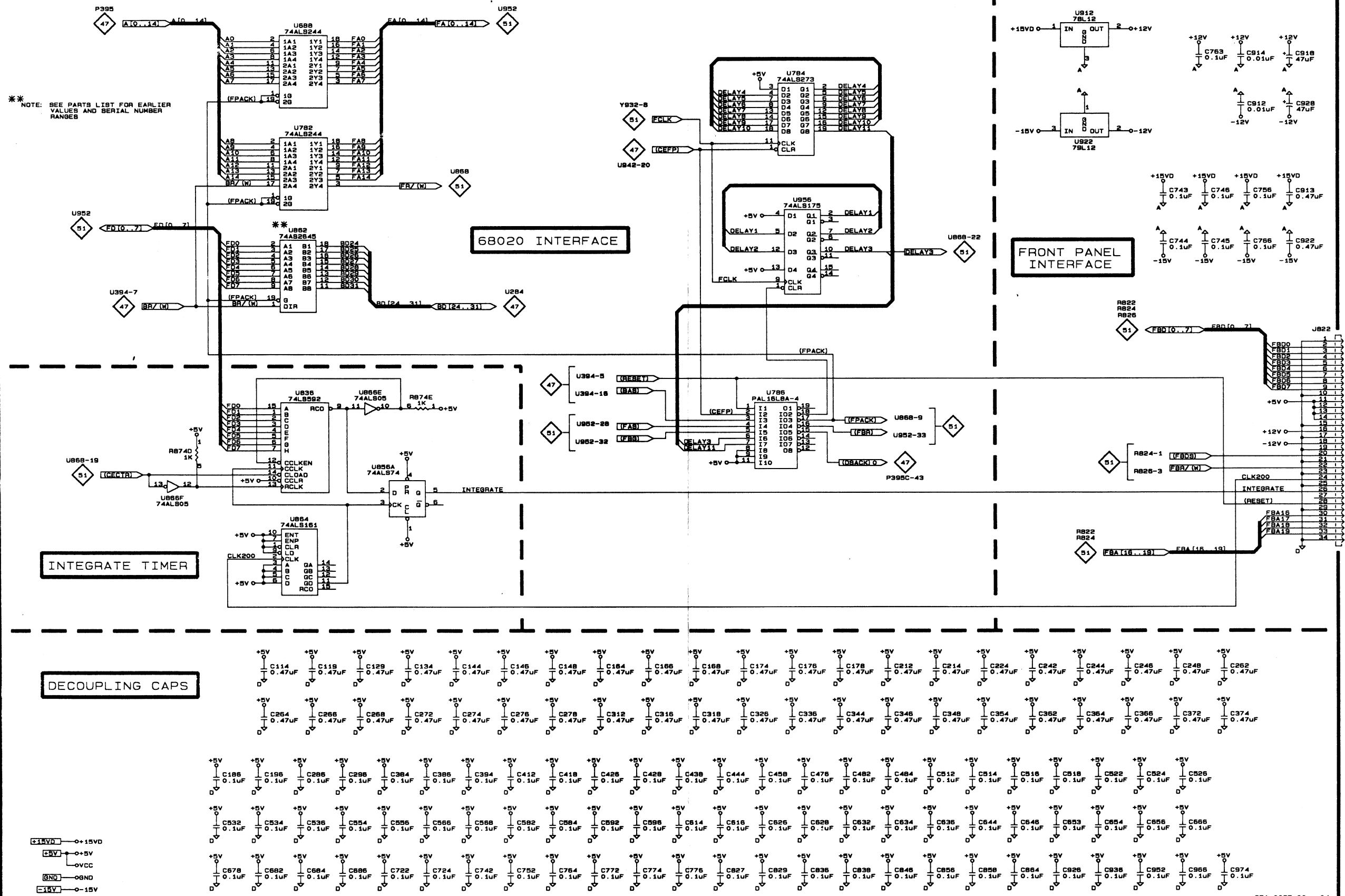
DISPLAY MEMORY BOARD
Schematic <52> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 53, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C114	B4	C438	E5	C772	D5
C119	C4	C444	E5	C774	D5
C129	C4	C458	E5	C776	D5
C134	C4	C476	E5	C827	E5
C144	C4	C482	F5	C829	E5
C146	D4	C484	F5	C836	E5
C148	D4	C512	F5	C838	E5
C164	D4	C514	F5	C846	E5
C166	D4	C516	G5	C856	F5
C168	E4	C518	G5	C858	F5
C174	E4	C522	G5	C864	F5
C176	E4	C524	G5	C912	H1
C178	E4	C526	B5	C913	H2
C186	B5	C532	B5	C914	H1
C196	B5	C534	B5	C918	H1
C212	B5	C536	B5	C922	H2
C214	F4	C554	C5	C926	F5
C224	F4	C556	C5	C928	H1
C242	F4	C566	C5	C936	G5
C244	G4	C568	C5	C952	G5
C246	G4	C582	D5	C966	G5
C248	G4	C584	D5	C974	G5
C262	G4	C592	D5		
C264	B4	C596	D5	J822	H2
C266	C4	C614	E5		
C268	C4	C616	E5	R874D	B3
C272	C4	C626	E5	R874E	C3
C274	C4	C628	E5		
C276	D4	C632	E5	U688	B1
C278	D4	C634	F5	U782	B1
C286	B5	C636	F5	U784	E1
C296	C5	C644	F5	U786	E3
C312	C5	C646	F5	U836	B3
C316	D4	C653	G5	U856A	C3
C318	D4	C654	G5	U862	B2
C326	E4	C656	G5	U864	B3
C336	E4	C666	G5	U866E	C3
C344	E4	C678	B5	U866F	B3
C346	E4	C682	B5	U912	G1
C348	F4	C684	B5	U922	G1
C354	F4	C686	B5	U956	E2
C362	F4	C722	C5		
C364	G4	C724	C5		
C366	G4	C742	C5		
C372	G4	C743	G2		
C374	G4	C744	G2		
C384	C5	C745	G2		
C386	C5	C746	G2		
C394	D5	C752	C5		
C412	D5	C756	H2		
C418	D5	C763	G1		
C426	D5	C764	D5		
C428	E5	C766	H2		

A B C D E F G H



DISPLAY MEMORY BOARD

Schematic <53> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 52, and 54.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U144	B4
U146	B5
U148	D4
U154	B3
U156	B3
U158	D3
U174	B1
U176	B2
U178	D1
U244	D5
U246	E4
U248	E5
U254	D3
U256	E3
U258	E3
U274	D2
U276	E1
U278	E2
U342	G4
U344	G5
U352	G3
U354	G3
U372	G1
U374	G2

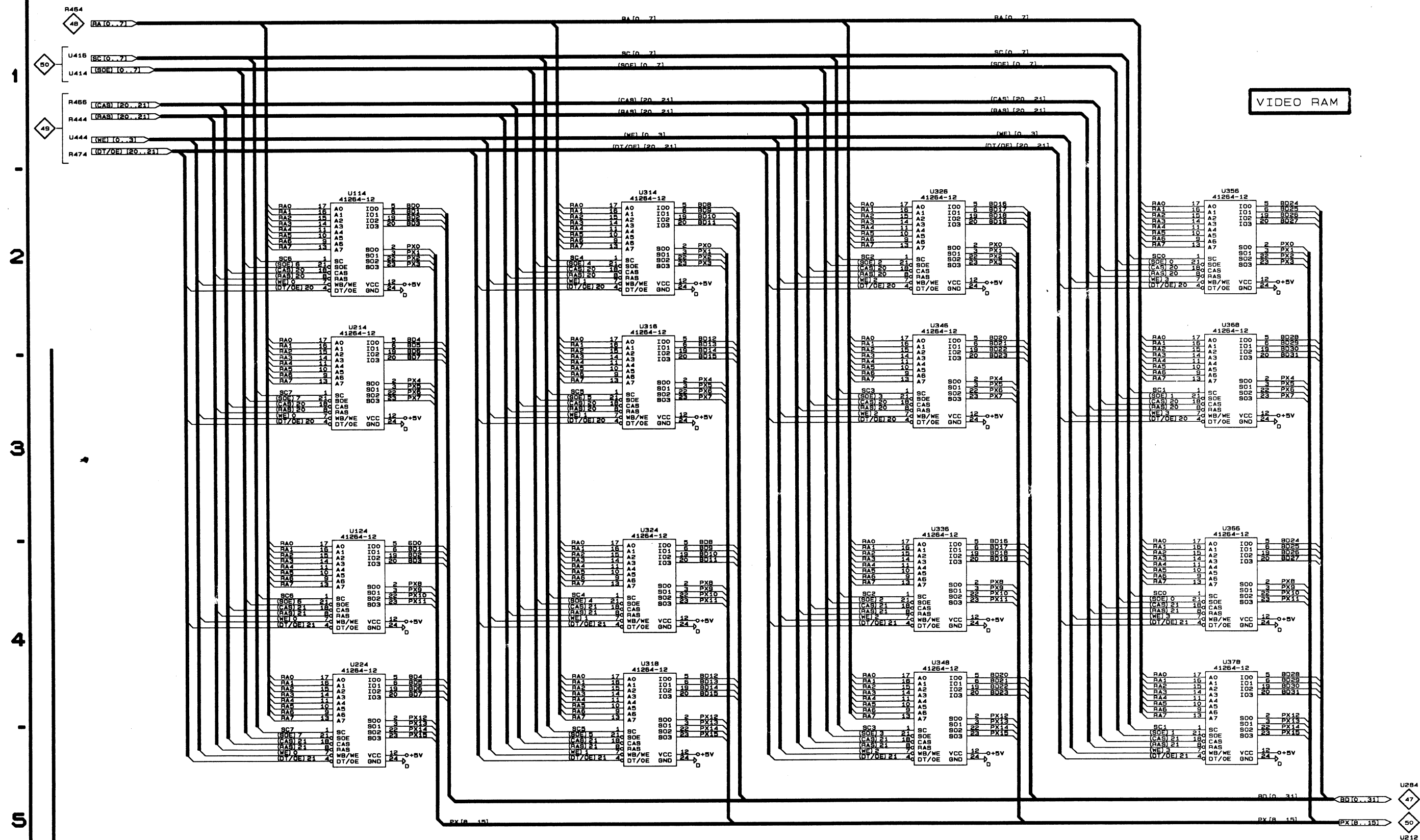
DISPLAY MEMORY BOARD Schematic <54> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A9 Partial A9 also shown on Schematics 47, 48, 49, 50, 51, 52, and 53.

CIRCUIT NUMBER	SCHEMATIC LOCATION
U114	B2
U124	B4
U214	B2
U224	B4
U314	D2
U316	D2
U318	D4
U324	D4
U326	F2
U336	F4
U346	F2
U348	F4
U356	G2
U366	G4
U368	G2
U378	G4

A B C D E F G H

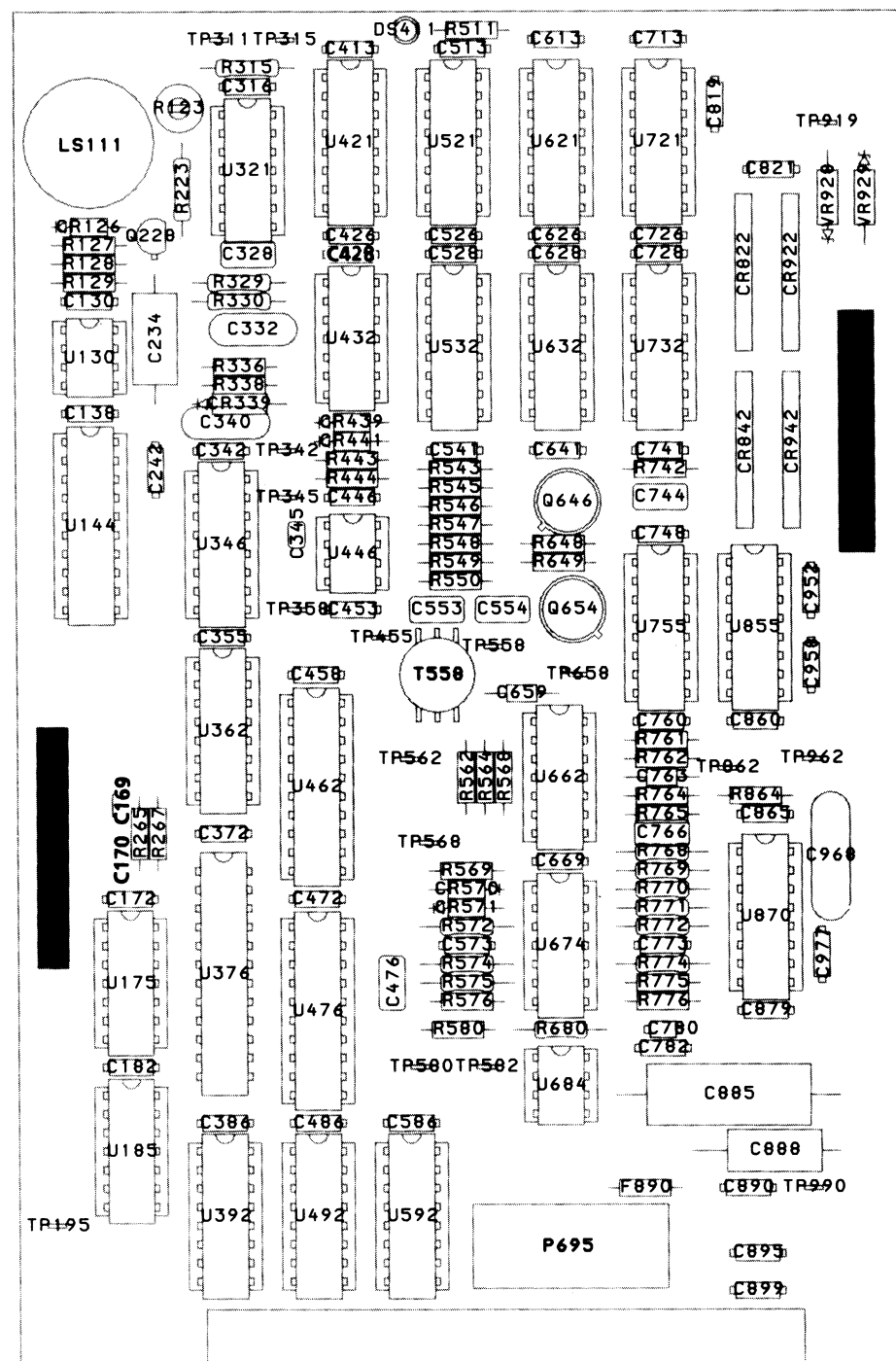


VIDEO RAM

FRONT PANEL BOARD Schematic <55> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A10A1 Partial A10A1 also shown on Schematic 56.



P/O 672-1299-00 - 03

A10A1 Front Panel Board

 Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C172	B4	LS111	E1
C182	B4		
C242	C4	P695	A1
C316	C5		
C342	C4	Q228	E1
C355	C4		
C372	C4	R127	E1
C386	D4	R265	E3
C413	D5	R267	E3
C426	C5		
C428	D4	TP195	F5
C446	B5	TP315	F5
C453	B5	TP358	F5
C458	D4	TP562	F5
C472	D4	TP580	F5
C486	E4	TP919	F5
C513	D5	TP962	F5
C526	D5	TP990	F5
C528	E4		
C541	D5	U144	D1
C573	B5	U175A	F4
C586	E4	U175B	B5
C613	D5	U175E	E3
C626	D5	U175F	E3
C628	E4	U185A	D2
C641	F4	U185C	B3
C669	B5	U185D	C3
C713	D5	U185E	C3
C726	D5	U185F	C3
C728	F4	U362	G4
C741	E5	U376	F3
C748	E5	U392	B2
C760	F4	U462	C1
C773	C5	U492	B3
C782	C5	U592	B2
C819	F4	U870B	B5
C821	E5		
C860	F4		
C865	C5		
C879	C5		
C885	B1		
C888	B1		
C890	B1		
C895	B1		
C899	B1		
C952	E5		
C958	E5		
C977	G4		
CR126	E1		
F890	B1		
J159	G2		

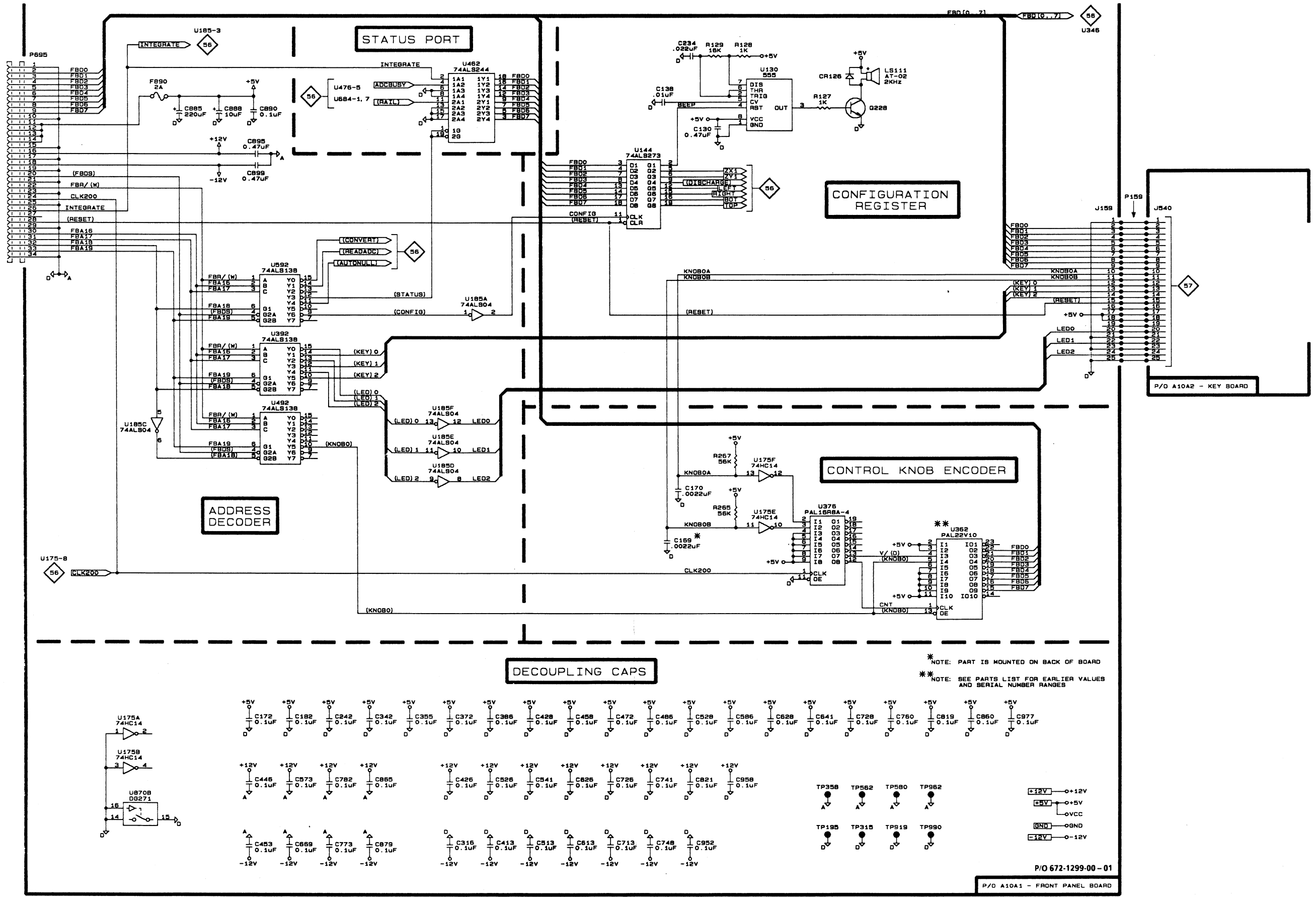
FRONT PANEL BOARD
 Schematic <55> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A10A1 Partial A10A1 also shown on Schematic 56.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C130	E1	C977	G4
C138	E1		
C169	E4	CR126	F1
C170	E3		
C172	B4	F890	B1
C182	B4		
C234	E1	J159	G2
C242	C4		
C316	C5	LS111	F1
C342	C4		
C355	C4	P695	A1
C372	C4		
C386	D4	Q228	F1
C413	D5		
C426	C5	R127	F1
C428	D4	R128	E1
C446	B5	R129	E1
C453	B5	R265	E3
C458	D4	R267	E3
C472	D4		
C486	E4	TP195	F5
C513	D5	TP315	F5
C526	D5	TP358	F5
C528	E4	TP562	F5
C541	D5	TP580	F5
C573	B5	TP919	F5
C586	E4	TP962	F5
C613	D5	TP990	F5
C626	D5		
C628	E4	U130	E1
C641	F4	U144	D1
C669	B5	U175A	B5
C713	D5	U175B	B5
C726	D5	U175E	E3
C728	F4	U175F	E3
C741	E5	U185A	D2
C748	E5	U185C	B3
C760	F4	U185D	C3
C773	C5	U185E	C3
C782	C5	U185F	C3
C819	F4	U362	F4
C821	E5	U376	F3
C860	F4	U392	B2
C865	C5	U462	C1
C879	C5	U492	B3
C885	B1	U592	B2
C888	B1	U870B	B5
C890	B1		
C895	B1		
C899	B1		
C952	E5		
C958	E5		

A B C D E F G H



* NOTE: PART IS MOUNTED ON BACK OF BOARD
 ** NOTE: SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES

FRONT PANEL BOARD
Schematic <56> Look-Up Chart

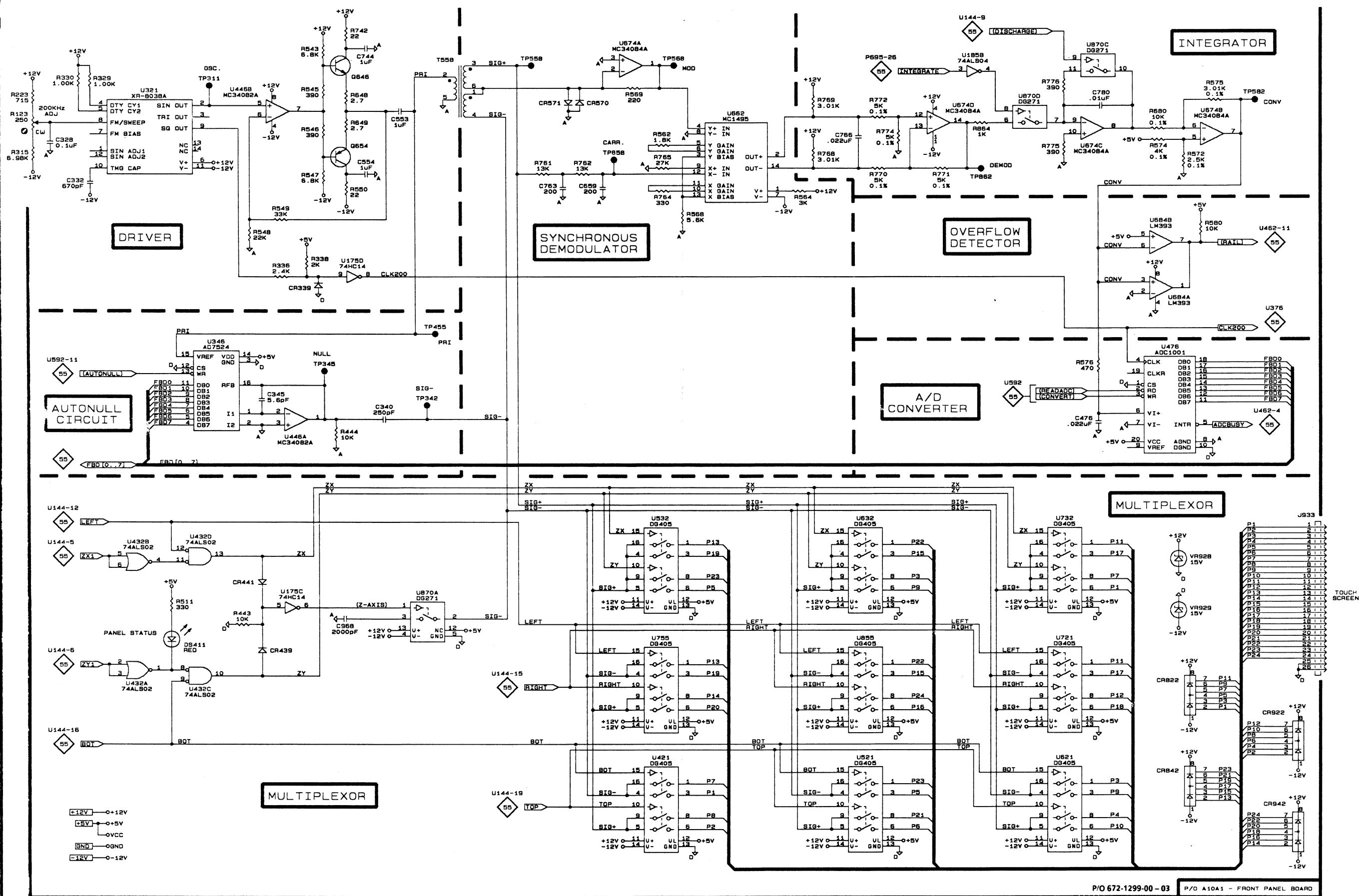
The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A10A1 Partial A10A1 also shown on Schematic 55.

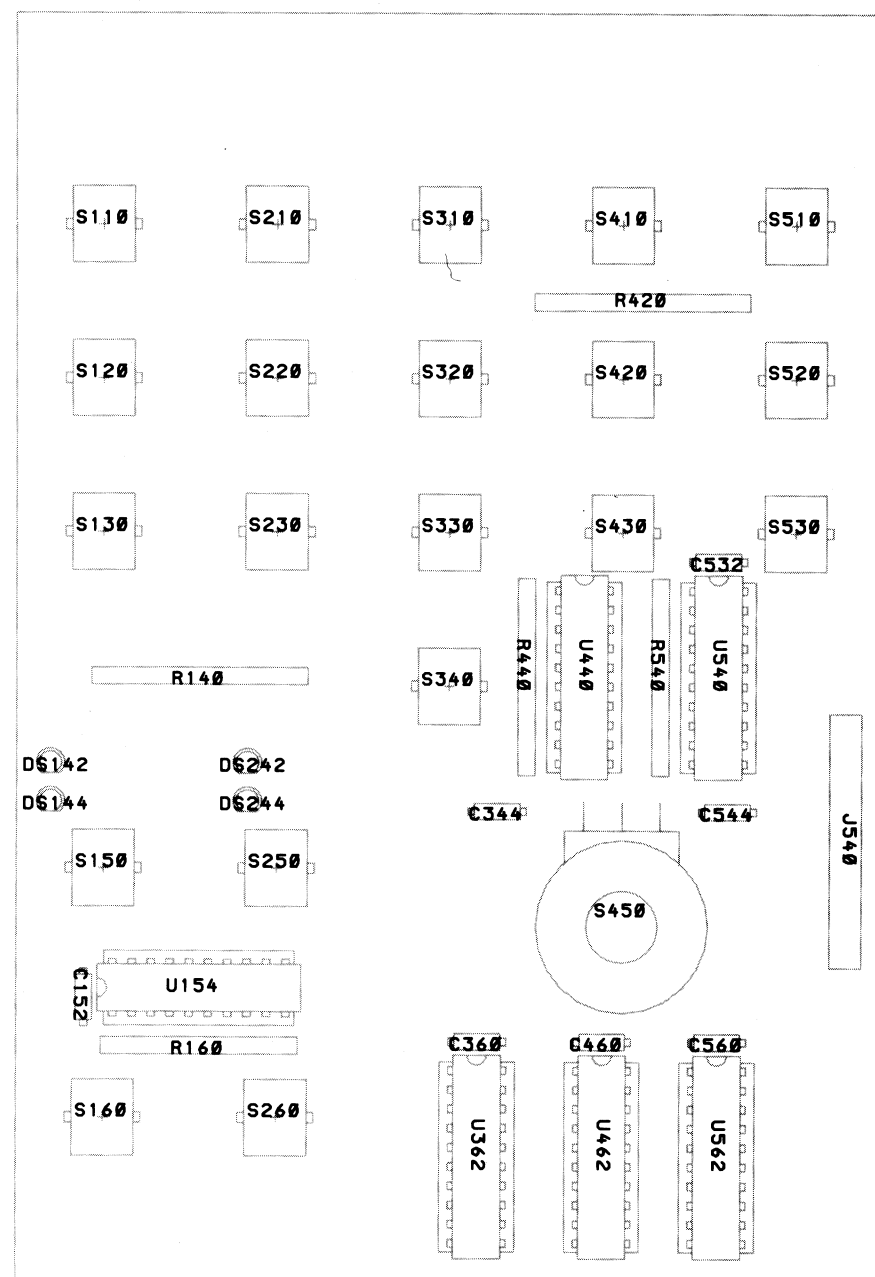
CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
C328	A1	R574	G1	U674B	H1
C332	A2	R575	H1	U674C	G1
C340	C3	R576	G2	U674D	F1
C345	B3	R580	H2	U684A	G2
C476	G3	R648	C1	U684B	G2
C553	C1	R649	C1	U721	G4
C554	C1	R680	G1	U732	G3
C659	D2	R742	C1	U755	D4
C744	C1	R761	D1	U855	E4
C763	D2	R762	D1	U870A	C4
C766	F1	R764	D2	U870C	G1
C780	G1	R765	D1	U870D	F1
C968	C4	R768	E1		
		R769	E1	VR928	G4
CR339	B2	R770	F1	VR929	G4
CR439	B4	R771	F1		
CR441	B4	R772	F1		
CR570	D1	R774	F1		
CR571	D1	R775	G1		
CR822	G4	R776	G1		
CR842	G5	R864	F1		
CR922	H4				
CR942	H5	T558	C1		
DS411	A4	TP311	B1		
		TP342	C3		
J933	H3	TP345	B3		
		TP455	C2		
Q646	B1	TP558	D1		
Q654	B1	TP568	D1		
		TP582	H1		
R123	A1	TP658	D1		
R223	A1	TP862	F1		
R315	A1				
R329	A1	U175C	B4		
R330	A1	U175D	C2		
R336	B2	U185B	F1		
R338	B2	U321	A1		
R443	B4	U346	B2		
R444	B3	U421	D5		
R511	A4	U432A	A4		
R543	B1	U432B	A4		
R545	B1	U432C	B4		
R546	B1	U432D	B4		
R547	B1	U446A	B3		
R548	B2	U446B	B1		
R549	B2	U476	G2		
R550	C2	U521	E5		
R562	D1	U532	D3		
R564	E2	U621	G5		
R568	D2	U632	E3		
R569	D1	U662	E1		
R572	G1	U674A	D1		

A B C D E F G H

1
2
3
4
5

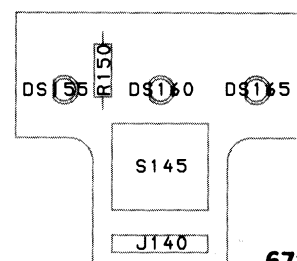


P/O 672-1299-00 - 03 P/O A10A1 - FRONT PANEL BOARD



P/O 672-1299-00 - 03

A10A2 Key Board



671-0111-00

A16 Switch Board

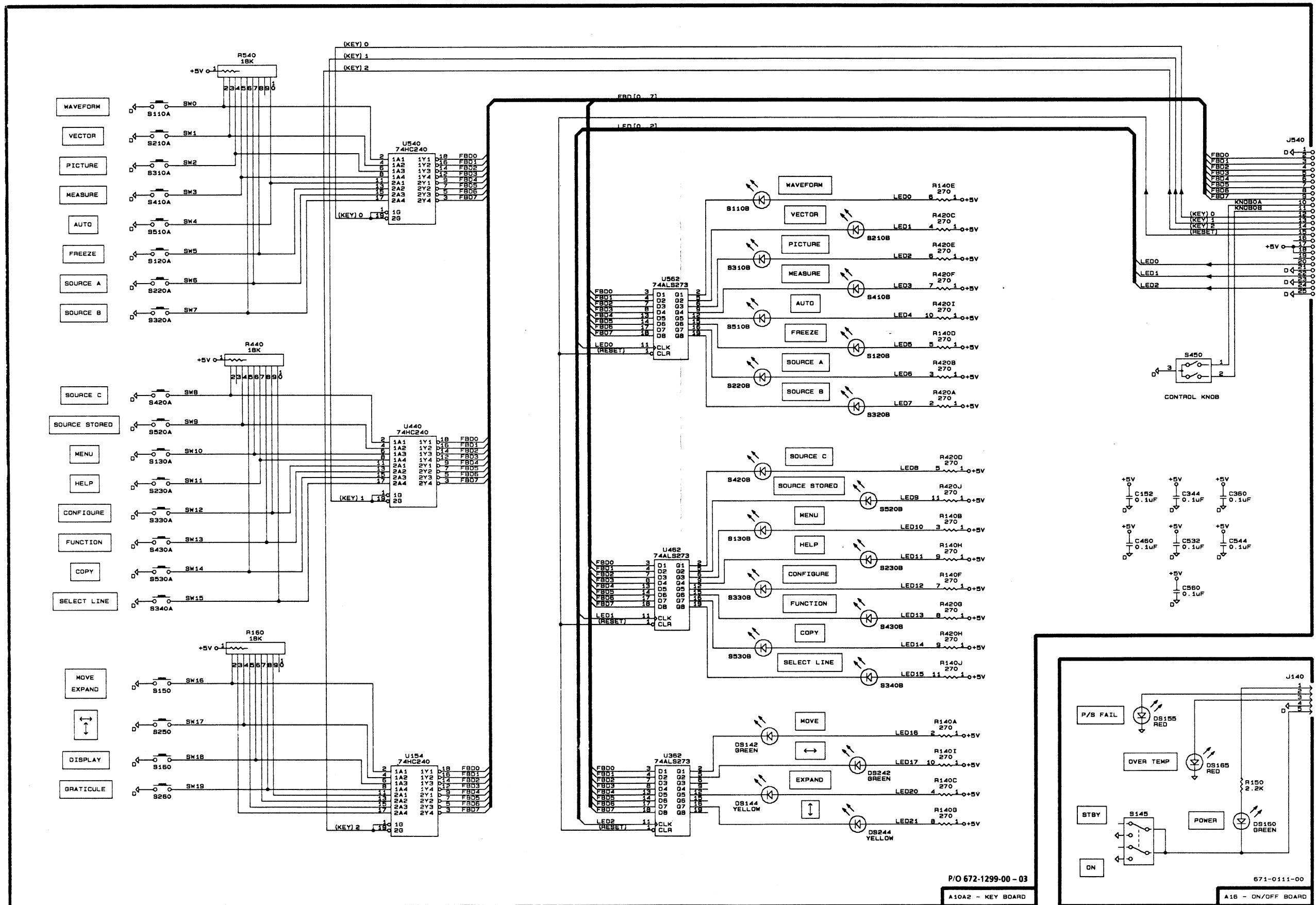
KEYBOARD

Schematic <57> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

CIRCUIT NUMBER	SCHEMATIC LOCATION	CIRCUIT NUMBER	SCHEMATIC LOCATION
A10A2		S220A	A2
C152	G3	S220B	E3
C344	G3	S230A	A3
C360	H3	S230B	E3
C460	G4	S250	A4
C532	G4	S260	A5
C544	H4	S310A	A1
C560	G4	S310B	E2
DS142	E4	S320A	A2
DS144	E5	S320B	E3
DS242	E5	S330A	A3
DS244	E5	S330B	E4
J540	H1	S340A	A4
R140A	F5	S340B	E4
R140B	F3	S410A	A2
R140C	F5	S410B	E2
R140D	F2	S420A	A3
R140E	F2	S420B	E3
R140F	F4	S430A	A3
R140G	F5	S430B	E4
R140H	F4	S450	G3
R140I	F5	S510A	A2
R140J	F4	S510B	E2
R160	B4	S520A	A3
R420A	F3	S520B	E3
R420B	F3	S530A	A4
R420C	F2	S530B	E4
R420D	F3	U154	C5
R420E	F2	U362	D5
R420F	F2	U440	C3
R420G	F4	U462	D4
R420H	F4	U540	C1
R420I	F2	U562	D2
R420J	F3	A16	
R440	B3	DS155	G4
R540	B1	DS160	H5
S110A	A1	DS165	G5
S110B	E2	J140	H4
S120A	A2	R150	H5
S120B	E2	S145	G5
S130A	A3		
S130B	E3		
S150	A4		
S160	A5		
S210A	A1		
S210B	E2		

A B C D E F G H

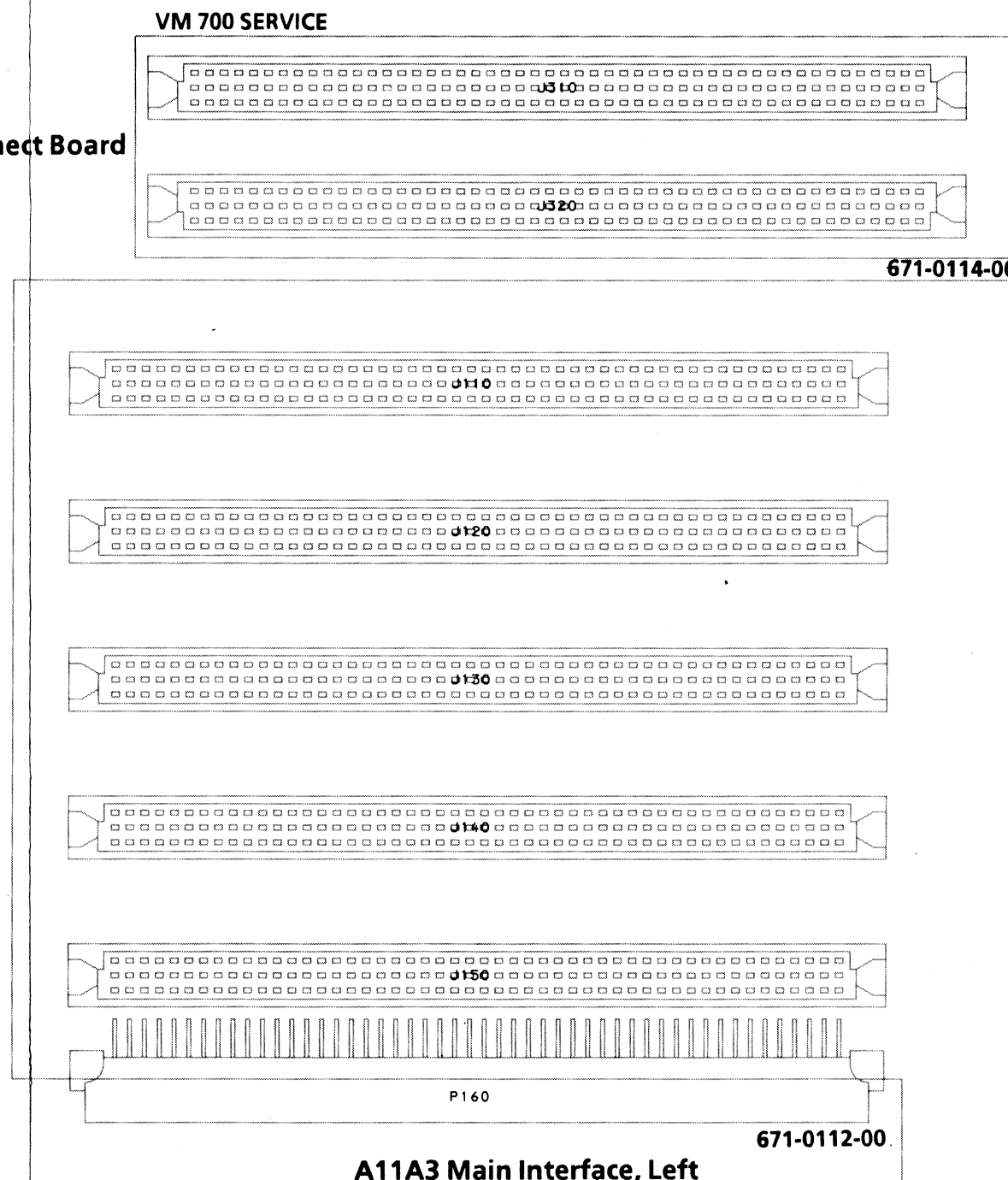
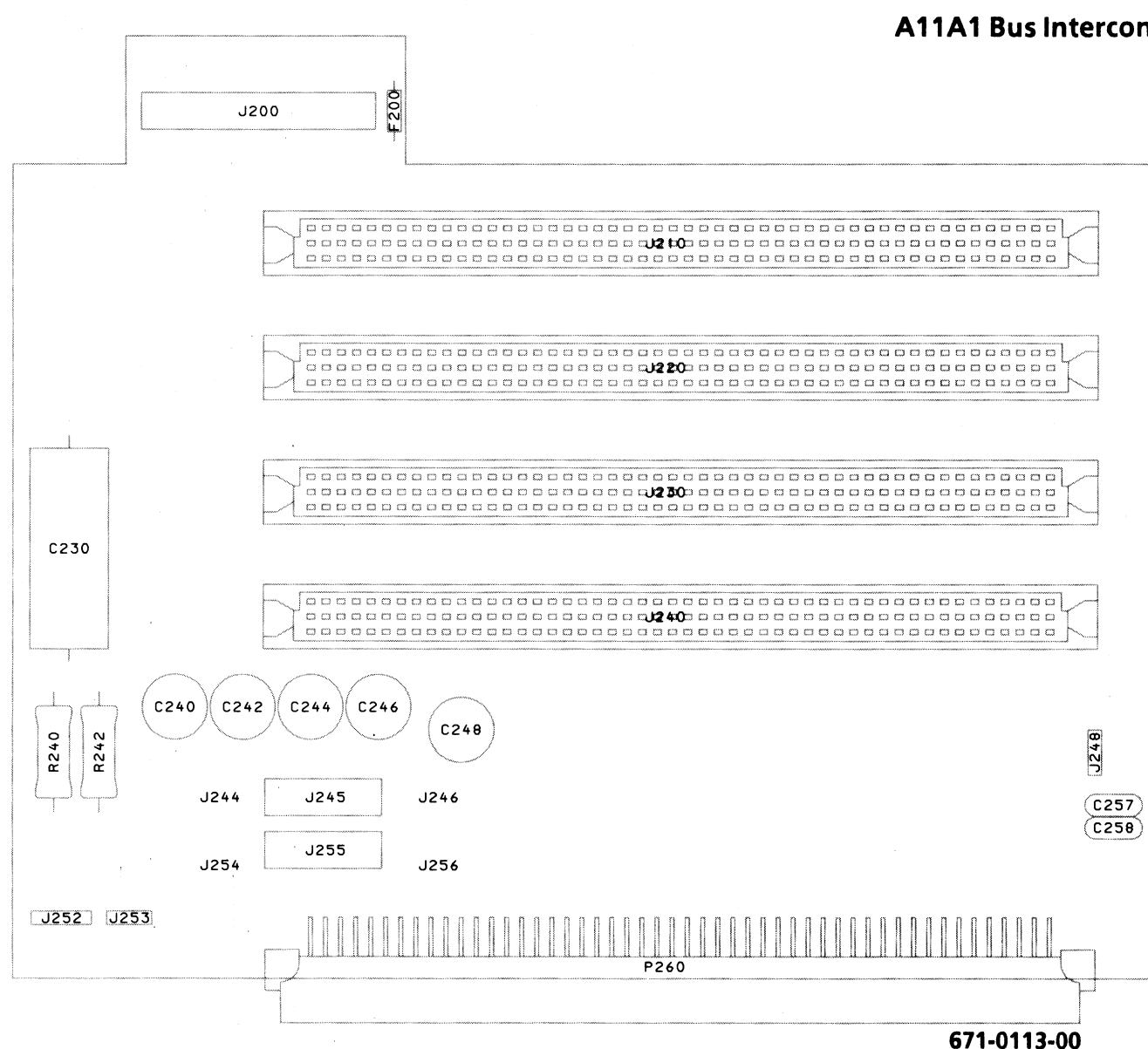


P/O 672-1299-00 - 03

A10A2 - KEY BOARD

671-0111-00

A16 - ON/OFF BOARD



A11A1 Bus Interconnect Board

VM 700 SERVICE

A11 Main Interconnect Board
672-1298-00

MAIN INTERCONNECT BOARD
Schematic <58> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A11 Partial A11 also shown on Schematics 59, 60, and 61.

CIRCUIT NUMBER	SCHEMATIC LOCATION
J210A	A2
J210B	B2
J210C	C2
J220A	E2
J220B	F2
J220C	G2
J230A	A4
J230B	B4
J230C	C4
J240A	E4
J240B	F4
J240C	G4

Static Sensitive Devices
See the section in this manual
on handling precautions for
static sensitive components.

A B C D E F G H

1

2

3

4

5

J390
CONTROLLER
BOARD

J926
DATA
ACQUISITION
BOARD

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)

AUX47A
(CACHEABLE)
AUX13B
AUX14B
(OVERTEMP)
(IRQ) 1..5

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

AUX13C
AUX14C
(POWERFAIL)
(RMC)
STZIO 11
R/W
AIO 311
DIO 311
(DSACK) 10..11
(BERR)
(DS)
(AS)

AUX13A
AUX14A
(NVMEABLE)
(SYSRESET)
(PWRRESET)
(IRQ) 6
AUX47A
(CACHEABLE)

AUX13B
AUX14B
(OVERTEMP)
(IRQ) 5
(IRQ) 4
(IRQ) 3
(IRQ) 2
(IRQ) 1

P260
59

0-15V 0+15V
0-5.2V 0+5V
0-15V 0+15V
0-5.2V 0+5V

671-0113-00

P/O A11A2 - MAIN INTERFACE RIGHT BOARD

MAIN INTERCONNECT BOARD Schematic <59> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A11 Partial A11 also shown on Schematics 58, 60, and 61.

CIRCUIT NUMBER	SCHEMATIC LOCATION
C230	C2
C240	C5
C242	C5
C244	C5
C246	C5
C248	C5
C257	C3
C258	C3
F200	H4
J200	H4
J244	B4
J245	B5
J246	B4
J248	B3
J252	B2
J253	B3
J254	B4
J255	B5
J256	B4
P260A	E1
P260B	F1
P260C	H1
R240	B2
R242	B2

MAIN INTERCONNECT BOARD
Schematic <60> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A11 *Partial A11 also shown on Schematics 58, 59, and 61.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
J110A	A2
J110B	B2
J110C	C2
J120A	E2
J120B	F2
J120C	G2
J130A	A4
J130B	B4
J130C	C4
J140A	E4
J140B	F4
J140C	G4

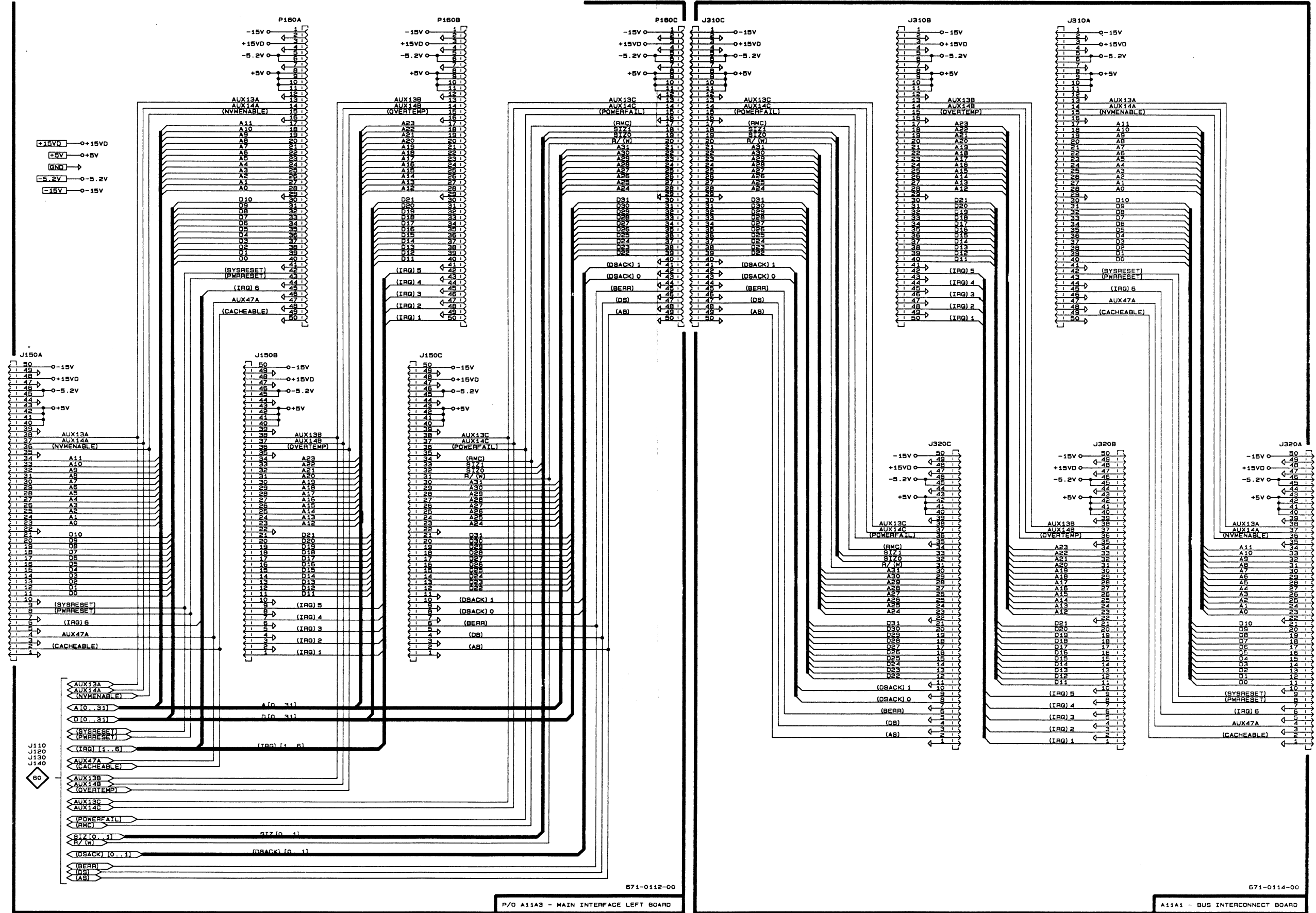
MAIN INTERCONNECT BOARD
Schematic <61> Look-Up Chart

The schematic diagram has an alpha-numeric grid to assist in locating parts within that diagram. The etched circuit boards follow a numbering sequence starting with the lowest number at the upper left corner, as pictured in this manual.

ASSEMBLY A11 *Partial A11 also shown on Schematics 58, 59, and 60.*

CIRCUIT NUMBER	SCHEMATIC LOCATION
J310A	G1
J310B	F1
J310C	E1
J320A	H3
J320B	G3
J320C	F3
J150A	A3
J150B	B3
J150C	C3
P160A	B1
P160B	C1
P160C	E1

A B C D E F G H



VM700 Problem Report Form

Name:

Company:

Address:

City:

State:

Zip:

Country:

Instrument Serial # (found on rear of instrument):

Firmware Version (found on rear of instrument):

Hardware Version (found on rear of instrument):

Problem Description:

Please do not write outside the border

Please
Remove
Sheet
From
Manual
At
Perforation

Please fold sheet exactly in half and tape at bottom of sheet



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 1 BEAVERTON, OR

POSTAGE WILL BE PAID BY ADDRESSEE

TEKTRONIX, INC.
VM700 Marketing
Del. Sta. 58-639
P.O. BOX 500
BEAVERTON, OR 97075-9959

